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# **NINETY-SIXTH ANNUAL REPORT**

of the

# **DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

of

## **SOUTH CAROLINA**

Formerly the  
State Board of Health  
and  
S. C. Pollution Control Authority

For The Period Beginning July 1, 1974  
And Ending June 30, 1975

Printed Under the Direction of the  
State Budget and Control Board

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# DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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LETTER OF TRANSMITTAL

September 29, 1975

The Honorable James B. Edwards  
Governor of the State of South Carolina  
Columbia, South Carolina

Dear Governor Edwards:

I have the honor to submit to you the accompanying report of the Department of Health and Environmental Control for the fiscal year ended June 30, 1975.

Respectfully yours,

*E. Kenneth Aycock, M.D.*

E. Kenneth Aycock, M.D., M.P.H.  
Commissioner



## INTRODUCTION

Health has been defined by the World Health Organization as "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity." Through programs in environmental protection and personal health (early disease detection, prevention, diagnosis and treatment), the Department of Health and Environmental Control works to promote the best possible individual and community health and well being.

Because each program has stated objectives and a step-phased plan, the state and its citizens are more assured of the fullest possible return from each dollar spent for public health and environmental protection.

In the interest of brevity and economy, this report gives only a concise accounting of program activities. More detailed statistics are available in the various units within the agency.

## BRIEF HISTORY AND STATUTORY AUTHORITY

The Department of Health and Environmental Control was created in 1973 by the General Assembly through an act which merged the State Board of Health (created in 1878) and the Pollution Control Authority (created in 1970).

The authority of the agency is vested in the Board of Health and Environmental Control, which has seven members — one from each congressional district and one at large — appointed by the Governor. The Board is empowered to make, adopt, promulgate, and enforce reasonable rules and regulations for the promotion of the public health and the abatement, control and prevention of pollution.

The office of Commissioner, who is executive head of the agency, was created by the same act establishing the new department. This office replaces that of the State Health Officer which was created by the General Assembly in 1908.

The Department of Health and Environmental Control is the sole advisor to the State in matters pertaining to the public health and has the authority to abate, control and prevent pollution. Statutory authority for the agency is primarily provided in Titles 32 (sections 0.1-905.17 & 1105-1526.13) and 63 (sections 195-195.36) of the *S. C. Code*, 1962, as amended.





## BOARD OF HEALTH AND ENVIRONMENTAL CONTROL

<i>Members</i>	<i>City of Residence</i>	<i>Term Expiration and District</i>
Lachlan L. Hyatt, Chairman	Spartanburg	6/30/77 4th District
William M. Wilson, Vice-Chairman	Camden	6/30/77 5th District
I. DeQuincey Newman, Secretary	Columbia	6/30/77 2nd District
Caroline G. Newhall (Mrs. J. G.) (Resigned January 1975)	Hilton Head	6/30/75 1st District
William C. Moore, Jr., D.M.D. (Appointed to complete Mrs. Newhall's term)	Charleston	
W. A. Barnette, Jr.	Greenwood	6/30/75 3rd District
J. Howard Stokes, M.D. (Resigned October 1974)	Florence	6/30/75 6th District
J. Lorin Mason, Jr., M.D. (Appointed to complete Dr. Stokes' term)	Florence	
Leonard W. Douglas, M.D.	Belton	6/30/77 Member at-Large



## ENABLING LEGISLATION

The following legislation affecting the agency was passed by the General Assembly in FY 1975:

<i>Bill Desig. No.</i>	<i>Synopsis</i>
H. 2748, R. 212	Establishes in DHEC a program for support of care of persons suffering from End Stage Renal Disease.
H. 2926, R. 344	Prohibits Electrical Connections to Homes and Mobile Homes unless Owners Furnish Electrical Supplier Evidence of County Health Department Approval of Sewage Disposal Methods.
H. 2561, R. 224	Amends Act 1215 of 1974, to Require Reporting of Abortions to the State Director of Maternal and Child Health.
H. 2747, R. 400	Provides that DHEC may establish Policies to Allow Registered Nurses to Perform Certain Health Care Practices.
H. 2649, R. 225	Empowers DHEC to Promulgate Rules and Regulations governing Restriction of Sale of Hypodermic Devices to Pharmacies Only, and the Auditing of Records of Sale of Hypodermic Devices.
H. 2670, R. 226	Amends Act 920 of 1974, Medical and Dental Scholarships by DHEC, to revise factors to be considered in granting scholarship, and terms and conditions of such.
H. 2477, R. 399	Designates the DHEC to administer Rural Water and Sewer Grants, and Establishes an Advisory Committee.
H. 2724, R. 322	Further defines the Practices of Professional and Practical Nursing, and makes changes in reference to DHEC.
H. 2912, R. 242	Amends Act 118 of 1974, to Provide for Establishment of Membership of the Emergency Medical Services Advisory Council.
S. 23, R. 139	Amends Act 445 of 1971, Controlled Substances & Dangerous Drugs, to correct Schedule III, Provides Separate Registration of Practitioners, Provisions concerning Prescriptions for Controlled Substances.

- S. 269, R. 280 Amends Act 474 of 1967, to Require Boarding, Rest & Convalescent Homes Licensed by DHEC, to Furnish Itemized Statements of Charges for All Services.
- S. 376, R. 294 Requires Skilled and Intermediate Care Nursing Facilities Licensed by DHEC to Furnish Itemized Statements of Charges for All Services.
- S. 395, R. 276 Amends Act 1157 of 1970, Pollution Control Authority, to Change and Add Certain Definitions, Revise Provisions Relating to 1) Powers of Entity Charged with Controlling Pollution; 2) Variances Beyond Limitations Prescribed in Act; 3) Procedures Relative to Prosecution for Violations; 4) Emergency Provisions; and Further Provide for Confidentiality of Records, Reports or Information.
- H. 2747, R. 400 Provides that DHEC may establish policies to assign Registered Nurses to certain health care facilities.
- H. 2745, R. 395 Empowers DHEC to promulgate rules and regulations governing restriction of sale of hypodermic devices to pharmacies, and the auditing of records of sale of hypodermic devices.
- H. 2670, R. 296 Amends Act 920 of 1974, Medical and Dental Schools, to require factors to be considered in granting scholarship, and terms and conditions of such scholarship.
- H. 2477, R. 399 Designates the DHEC to administer Rural Water and Sewer Grants, and Establishes an Advisory Committee.
- H. 2724, R. 322 Further defines the practice of professional and paraprofessional nursing, and makes changes to reference to DHEC.
- H. 2912, R. 242 Amends Act 116 of 1974, to provide for establishment of membership of the Emergency Medical Services Advisory Council.
- S. 23, R. 139 Amends Act 415 of 1971, Controlled Substances & Dangerous Drugs, to correct schedule III, provides separate registration of practitioner provisions concerning prescriptions for controlled substances.



## OFFICE OF THE COMMISSIONER

Many activities of the Commissioner and his staff are essentially in performance of the basic activities necessary for day to day operation of the agency, i.e., participation on various governmental and interagency councils and advisory committees, budget preparation, staffing, coordinating, planning, directing and other administrative functions. One of the primary responsibilities is to provide leadership and direction in program development and agency policy. Examples of some of the significant activities include, but are not limited to, the following:

1. Implementation of a new financial management system utilizing data processing services to provide program and administrative staff with monthly expenditures and budget balances. In conjunction with development of new management by objective plans, program budgets were developed and expenditure reporting by programs was prepared to aid in management.
2. Provision of twenty educational loans to twenty medical and dental students under the scholarship program initiated this year for the purpose of providing financial aid to those students agreeing to practice in a medical shortage area.
3. Established a committee to recommend policies and guidelines governing educational leave and subsequently to assist in evaluating candidates for stipends and agency directed leave as appropriate.
4. Recruited an internal auditor, district medical director and a chief pharmacist. The latter's responsibilities include providing technical advice and assistance to staff, particularly those in the district and county units in handling, dispensing and storage of narcotics and drugs.
5. Occupational Health Laboratory became the first state laboratory in the southeast (fifth nationally) to receive accreditation by the American Industrial Hygiene Association.
6. Established an employee health service.
7. Continued efforts to decentralize agency functions and responsibilities to district staff.

## BUSINESS MANAGEMENT

### *Mission:*

Business Management provides to all units of the agency, goods and services appropriate with specific demands, preferences, and quality.

Purchase order processing time was reduced from 21 days in FY 74 to 14 days in FY 75. The number of purchase orders processed was 9,247. The amount of inventory increased 38%, from \$2,680,000 in FY 74 to \$3,705,000 in FY 75.

A major accomplishment was the establishment of a statewide contract for consumable medical supplies for the Home Health Services program. It is estimated that this will save \$150,000 annually.

The mail and supply section handled 952,812 pieces of mail and United Parcel Service (UPS) packages at a postage cost of \$83,766 and a UPS cost of \$19,000.

## COMMUNICATIONS

### *Mission:*

To provide the resources and the coordination necessary to design a public and in-service educational thrust into all agency activity.

To provide printing, photo processing, art and audio-visual services to the agency.

### *Significant Activities:*

Services provided are enumerated in the following table.

## ACTIVITIES AND SERVICES

<i>Type Service</i>	<i>Number</i>
B & W prints .....	12,530
Color slides .....	30,201
Color prints .....	527
Pages printed .....	7,552,578
Quick copy pages printed .....	1,257,625
Slide/tape presentations produced .....	12
Health publications completed .....	75
Mini-courses completed .....	3
News releases distributed .....	210
Public service announcements produced .....	27

Plans were made to establish support facilities in all districts and counties. However, at the end of the year only 9 of 12 districts and 31 of 46 counties had been properly equipped because some of the necessary equipment had been delivered in an inoperative condition.



The Educational Resources Center, established last year as the agency's distribution point for health and environmental education materials, distributed 837,166 such materials.

Several of the health education materials produced received professional awards for creativity and design.

## COMPREHENSIVE HEALTH PLANNING

### *Problem:*

The providers of health care and the community leadership lack both the awareness of the health needs of the citizens of this state and the necessary coordination needed to identify and meet such needs.

### *Objective:*

To develop complete functioning formal areawide comprehensive councils throughout the state in the Governor's 10 planning districts by July 1, 1975, to include adequate staffing for each.

### *Narrative:*

There is a strong, functioning areawide comprehensive health planning council in each of the ten recognized planning districts in the state. Each of these has been staffed to accomplish goals in health planning.

### *Objective:*

To update and maintain a current State Comprehensive Health Plan by the end of FY 75.

### *Narrative:*

The 1975 State Comprehensive Health Plan was completed, approved, printed and distributed to the agency's Board, the 100 member Health Forum, the 35 member Advisory Council for Comprehensive Health Planning and all task force members.

### *Objective:*

To attain positive impact throughout FY 75 upon all state and local legislation relative to health.

### *Narrative:*

Eighty-eight Legislative bills related to health were reviewed by the Legislative Review Committee and the Advisory Council for Comprehensive Health Planning and 21 were ratified by the General Assembly.

### *Objective:*

To review and comment on applications for changes in health facilities and services under Section 1122 of PL 92-603.

*Narrative:*

The staff reviewed 80 applications for changes in health facilities under the capital expenditure review program and approval for 34 of these was recommended to the Department of Health, Education and Welfare (DHEW). The remaining ones are still under consideration.

*Objective:*

To review and comment on grant applications under federal Office of Management and Budget Circular A-95.

*Narrative:*

Six hundred three A-95 reviews were completed and recommendations given in cooperation with the Governor's office.

*Objective:*

To review and comment on grant applications for Federal funds.

*Narrative:*

Thirty-five DHEW Projects were reviewed with recommendations to Region IV DHEW.

*Objective:*

To place 70 health trained veterans into health careers in the state.

*Narrative:*

Forty-four veterans trained in health related jobs were placed in health related careers within the state.

## DATA SYSTEMS MANAGEMENT

*Mission:*

To provide data management services to all units of the agency so as to assist in the effective management of the agency.

To assist in the planning and development of operational data management services necessary to monitor, predict or otherwise improve the efficiency and effective management of activities provided by the agency.

*Significant Activities:*

In addition to the normal data processing, several specific tasks were undertaken for the year as described in the ensuing paragraphs.

A Mohawk Remote Job Entry installation was placed in operation on September 30, 1974.

Activity, such as finance, vital records and laboratory, which had been on the Spring Mills computer was transferred to the computer of the Department of Mental Health by the end of January, 1975. Control-



Monitoring is taking place on all systems operating at the Department of Mental Health.

Initial efforts to formulate, with appropriate areas of responsibility within the agency, an inventory of information needs of the agency, and to determine the data requirements necessary to supply the need, have been completed.

Throughout the year, considerable effort was devoted to the financial systems (asset accounting at State Park, payroll system, personnel budgetary system, third party billing system, and a Title IV-A sub-system for reimbursements), as well as to Vital Records.

This service has continued to experience organizational difficulties, as well as difficulties in intra-agency communications. These should be resolved in the near future. Some specific steps under way are the formalizing of work requests, establishment of priorities, better allocation of manpower, and closer contact with those being supported.

## EPIDEMIOLOGY

### *Mission:*

To investigate the causes of disease outbreaks in South Carolina and to recommend preventive measures. To serve as a center for communicable disease reporting.

### *Significant Activities:*

The communicable disease morbidity and mortality reporting system was stimulated by continuing the circulation of the agency's newsletter "Epidemiologic Notes". Raw data was analyzed and interpreted in the newsletter. In supplying this feed-back to reporting and to non-reporting physicians, motivation to continue or begin reporting was supplied.

During the year this supportive service has absorbed the personnel and assumed the functions of the immunization supportive service. These former field representatives, now functioning as epidemiologic assistants, will provide field expertise in the surveillance and investigation of a selected range of communicable diseases. This expansion of effort was closely coordinated with appropriate District Directors.

Aero-allergen surveys are now being implemented weekly in Charleston County with published reports being forwarded by the County Health Department to all interested physicians. This is the first such program in this state and it is hoped that this pilot-program can be extended to other districts.

Communicable disease investigation and consultations included such varied conditions as rabies, salmonellosis, meningococcosis, rubella,

pertussis, tetanus, infectious hepatitis, and a unique episode of biphenyl poisoning in at least 10 members of a family.

The following tabulation, for calendar year 1974, illustrates the magnitude of reported communicable disease requiring continued surveillance, consultation services and motivation to corrective action.



SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
1974 CALENDAR YEAR  
COMMUNICABLE DISEASE MORBIDITY REPORT

[illegible]

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
1974 CALENDAR YEAR  
COMMUNICABLE DISEASE MORBIDITY REPORT

County	Food Poisoning	Brucellosis	Tularemia	Rocky Mountain Spotted Fever	Typhus Fever	Tetanus	Diphtheria	Poliomyelitis	Chickenpox	Amebiasis	Gonorrhea	Infectious Syphilis	Active Tuberculosis	Rheumatic Fever	Meningitis, Other
1973 Total	0	2	1	32	0	1	0	0	1300	4	20533	1234	619	2	44
1974 Total	0	1	0	56	0	4	0	0	1068	0	22499	712	641	0	55
ABBEVILLE											71		3		1
AIKEN											236	1	12		
ALLENDALE											77		3		
ANDERSON				4							1249	2	15		
BAMBERG											190	4	1		1
BARNWELL											119		6		
BEAUFORT				4					6		229	19	10		1
BERKELEY											134	2	12		
CALHOUN									13		96		1		
CHARLESTON				5		1			485		2943	55	58		
CHEROKEE				2							101	1	1		
CHESTER				1							141	2	7		1
CHESTERFIELD											62	7	6		
CLARENDON											334	10	7		
COLLETON											58	10	6		
DARLINGTON						1			118		239	14	23		6
DILLON											310	6	22		
DORCHESTER						1					316	2	8		
EDGEFIELD											120	4	4		
FAIRFIELD				1							111	1	3		
FLORENCE									13		904	58	34		2
GEORGETOWN											102	25	8		1
GREENVILLE				11					60		3462	51	55		24
GREENWOOD									143		192	16	6		1
HAMPTON		1									57	8	5		
HORRY									4		466	31	32		
JASPER											59	1	2		
KERSHAW											219	2	11		1
LANCASTER									19		172	2	11		1
LAURENS											160	9	19		
LEE											132	3	10		
LEXINGTON				2					2		298	12	6		1
MARION											102	13	15		1
MARLBORO											56	2	7		
McCORMICK											275	1	3		
NEWBERRY											119		4		1
OCONEE				2							144	1	6		
ORANGEBURG									145		952	14	38		4
PICKENS											54	1	6		3
RICHLAND				3					28		3188	195	68		
SALUDA											51				
SPARTANBURG				15		1			10		873	13	34		3
SUMTER									22		603	60	13		2
UNION											94	1	8		
WILLIAMSBURG											243	6	17		
YORK				6							625	10	15		

Gonorrhea not stated — 75  
Military Gonorrhea — 1680  
Military Syphilis — 37



## FINANCE

*Mission:*

To support the fiscal policies of the Agency and to exercise responsibility for the fiscal management of the agency.

*Significant Activities:*

A Financial Management System (FMS) designed to provide financial information to management personnel at the division level and up was developed and implemented. FMS reports were provided monthly on a current basis beginning in January 1975.

An encumbrance system, in lieu of a cash system, was developed during the first quarter. Encumbrances were included in the FMS reports on a current basis beginning January 1, 1975.

Periodic meetings were held with program fiscal managers to discuss budgeted amounts and related expenditures.

Total expenditures for FY 75 follow:

## FINANCIAL EXPENDITURES

Source	Dollar Amount
<i>Expenditures from State Appropriations</i>	
Dept. of Health & Environmental Control .....	\$21,410,573
State Park Health Center .....	<u>3,129,351</u>
Total .....	\$24,539,924
<i>Expenditures from Local Appropriations</i>	
County Health Units .....	\$ 4,961,215
Maternity & Infant Care (Charleston) .....	25,000
Maternity & Infant Care (Greenville) .....	<u>125,000</u>
Total .....	\$ 5,111,215
Clinics & Other Specific Services (Fees) .....	609,978
<i>Federal Grants</i>	
Public Health Service	
Planning Grant (314-A) .....	\$ 130,700
Program Funds (314-D) .....	<u>1,123,349</u>
Children's Bureau	
Crippled Children Program .....	913,666
Maternal & Child Health .....	3,185,683
Mental Retardation .....	<u>32,000</u>
Environmental Protection Agency	
Water Pollution Control .....	982,910
Air Pollution Control .....	<u>551,231</u>
Total Grants .....	\$ 6,919,539
<i>Federal Projects &amp; Contracts</i>	
Air Control .....	\$ 12,529
Highway Safety .....	22,032
Diabetic Detection .....	40,306
Pesticide Study .....	38,999
Cervical Cystological .....	<u>30,533</u>

Hospital Medical Facilities .....	46,783
Administration of Federal Projects .....	309,618
Migrant Health (Beaufort) .....	15,146
Migrant Health (Charleston) .....	75,226
Migrant Health (Statewide) .....	14,307
Immunization .....	77,344
Maternal & Infant Care (Charleston) .....	10,145
Addictions Project (Richland County) .....	4,802
Consumer Protection .....	10,567
Developmental Disabilities .....	550
Family Planning .....	3,078,608
Family Planning Training .....	41,763
Community Mental Health .....	2,828
Food Franchise Inspection .....	14,484
Water Plant Operations Training .....	6,910
Health Mobilization .....	1,110
Venereal Disease .....	158,694
Child Evaluation .....	11,868
Military Experience Directed into Health Careers (MEDIHC) .....	11,427
Home Bound Therapeutics .....	24,814
Health Maintenance Organization .....	86,038
Military Assistance to Safety .....	7,587
Addictions Project .....	32,014
Hypertension (Catawba) .....	19,067
Maternal & Infant Care (Pickens) .....	203,998
Dental Project .....	38,261
Occupational Safety & Health .....	151,666
Public Employment (CETA) .....	5,623
Solid Waste Disposal .....	78,969
Manpower Training (EPA) .....	6,996
Solid Waste Collections & Disposal Operators .....	5,874
Pediatric Tissue Contract .....	5,949
Women, Infant & Children (Food Program) .....	2,339,737
Demonstration Hypertension Project .....	50,187
Venereal Disease Research .....	25,975
Emergency Medical Training .....	5,157
Waste Water Treatment Operator .....	3,752
Home Health Service Training .....	4,865
Student Intern Program .....	1,833
Emergency Medical Services .....	38,319
Medical Facilities Construction .....	3,477,788
Total .....	\$10,651,048
<i>Social Security Administration</i>	
Health Insurance Program .....	\$ 114,111
Medicare & Medicaid .....	4,473,806
Skilled Nursing Facilities .....	285,776
Section 1122 SSA .....	120,731
Total .....	\$ 4,994,424
GRAND TOTAL EXPENDITURES .....	<u>\$52,826,128</u>



## HEALTH DELIVERY SYSTEMS (HMO)

### *Problem:*

The present health care delivery system in South Carolina is not meeting all the needs and desires of the people. It is not organized for optimum continuity and coordination of services. The quality and cost of medical care is not adequately monitored. There is a serious lack of health manpower.

### *Objective:*

To develop a health maintenance organization (HMO) offering comprehensive health care, including inpatient and outpatient services, home visits, prescription drugs, dental care and mental care, to state employees, public school teachers and employees with milestones as follows:

- a. Provide comprehensive health care services for 500 state employees by January 1, 1975.
- b. To serve 9,500 additional state employees by June 30, 1975.
- c. To establish a pilot project designed to provide services through departmental facilities at State Park Health Center by May 1975.

### *Narrative:*

The following activities to accomplish the objective were completed in FY 1975:

- a. On July 2, 1974, Governor West signed Act 1120 of 1974 which provides for HMOs, defines their functions, provides for their regulation and licensing by the Department of Health and Environmental Control and by the Department of Insurance, permits their contracting for health services, and prohibits them from unauthorized practice of medicine or other professions or to act as insurers.
- b. On August 6, 1974, the South Carolina Health Care Plan, Inc., was established as a legal vehicle for management of the HMO.
- c. On August 1, 1974, a contract was signed with the South Carolina Medical Care Foundation for the development of a plan for the provision of medical services to HMO subscribers by members of the Foundation. The plan was submitted on October 7, 1974. In order to provide the wide benefits required by the Federal Government for HMO support, the Foundation felt it would be necessary to have a monthly rate of \$23 for single subscribers and \$64 for families. The HMO staff felt that such a plan could not be marketed because the competitive Blue Cross-Blue Shield plan for State employees had a rate of \$33 for families and the difference in

benefits would not be sufficient to make the HMO plan attractive to the bulk of State employees who have relatively small incomes. After further negotiation, we were informed on December 20, 1974 by the Foundation that it did not seem feasible to continue with the project at that time.

- d. Further consideration was given to the feasibility of beginning the HMO using facilities at the State Park Health Center and employed staff. On April 8, 1975, the Board of Health and Environmental Control resolved to discontinue the project until future developments made it more feasible.
- e. On February 24, 1975, a public hearing was held on proposed regulations for the operation of HMOs drafted jointly by the Departments of Health and Environmental Control and Insurance. On June 13, 1975, the official Rules and Regulations for the Operation of Health Maintenance Organizations of South Carolina were filed in the Office of the Secretary of State.



## HEALTH FACILITIES AND SERVICES

*Problems:*

Approximately 25% of needed general hospital beds and 50% of long-term and intermediate care beds combined either do not meet current standards or do not exist; approximately 70% of the public health centers are not adequate; rural counties, in particular, are financially limited in providing adequate health facilities; providers sometimes propose facilities and services in areas where existing facilities are capable of providing needed services; and, health services within licensed facilities are not always available to indigent patients.

Design review is required to insure that proposed facilities meet licensing requirements; delays in the review process cause higher construction costs and delayed availability of services; many health facilities constructed prior to 1972 do not meet current life and fire safety standards required under the Medicare and Medicaid programs.

Facilities have been allowed in the past to participate in the Medicare and Medicaid programs without being in full compliance with the Conditions of Participation; regulations now mandate that these facilities be in full compliance in order to be eligible for reimbursement; facilities do not continuously meet the minimum requirements of licensing standards.

Poor understanding by the individual hearing aid dealer of his/her responsibility under the Rules and Regulations promulgated pursuant to the Act.

*Objective:*

To administer the total construction grant and loan funds for health facilities allocated to the state on the basis of need and issue certificates of need where warranted.

*Narrative:*

All funds available were obligated in accordance with priorities established in the state plan which identifies need. In FY 75 this involved \$745,671 for out-patient facilities. These were actually FY 74 funds reallocated following cancellation of a project by the original applicant.

The certification of need for health facilities and services was administered in accordance with the State Hospital Construction and Franchising Act. Certificates of need were issued as follows:

TABLE I — CERTIFICATES OF NEED

Type Facility or Service	No. Issued	No. Exempted	No. Denied
Hospital Care .....	19	18	0
Nursing Care .....	18	3	0
Intermediate Care .....	8	0	0
Other .....	5	3	0
	50	24	0

Availability of beds in various facilities is indicated in Table II.

TABLE II — AVAILABILITY OF BEDS, BY TYPE FACILITY

Type of Facility	No. of Beds Needed*	No. Beds Conforming*	% of Need Met (Conforming)*
General Hospitals .....	**	11,306	**
Long Term Care .....	8,615	4,775	55.4
Intermediate Care .....	3,961	1,549	39.1
Mental Facilities .....	6,711	1,450	21.6
Tuberculosis Hospitals .....	209	284	135.9
Rehabilitation .....	700	110	15.7

\* Proposed Draft—FY 1976 Amendments to The South Carolina State Plan for Franchising, Construction and Modernization of Hospitals and Related Medical Facilities.

\*\* Data not available at this time.

The changes between FY 74 and FY 75 in the number of beds is due to changes in criteria for calculating and change in utilization. In most instances the number of beds conforming increased because of completion of construction or modernization of facilities.

The availability of other health facilities and services is as follows:

TABLE III — AVAILABILITY OF OTHER HEALTH FACILITIES AND/OR SERVICES

Type Facility	Total Needed*	No. Conforming*	% Need Met (Conforming)*
Outpatient and Emergency .....	127	86	67.7
Rehabilitation .....	17	3	17.6
Public Health Centers (Primary) ....	61	21	34.4
Public Health Centers (Auxiliary) ....	169	52	30.8
Community Mental Health Facilities ..	19	12	63.2
Developmental Disabilities Facilities ..	**2,424	**1,601	66.05

\* Proposed Draft FY 1976 Amendments to South Carolina State Plan for Franchising, Construction and Modernization of Hospital and Related Medical Facilities.

\*\* 1974 Developmental Disabilities Plan (Most Current Inventory) — No Criteria for Conformity — Total Facilities Available.

Changes indicated in rehabilitation, outpatient, and public health facilities are primarily related to new facilities and updated inventories of services provided to better fill the needs of the public.

Where health facilities are constructed in whole or part with Hill-Burton monies, federal requirements are that a level of uncompensated services be provided to persons who are unable to pay. In FY 75



\$32,371,340 of such services were provided. Three options are available to the facilities and the options selected are indicated in Table IV.

TABLE IV — UNCOMPENSATED SERVICES FOR PERSONS UNABLE TO PAY (HILL-BURTON)

Type Facility	No. Facilities	Option Selected		
		3%	10%	Open Door
Hospitals . . . . .	51	26	9	16
Nursing Care . . . . .	12	7	1	4
Rehabilitation . . . . .	8	—	—	8
Public Health Centers . . . . .	26	—	—	26

Audits are made annually to insure compliance with option selected.

*Objectives:*

To insure that schematic and preliminary plans submitted for design review are processed in the bureau within 14 days of receipt and that final plans are processed in the department within 60 days.

To insure that 100% of health facilities certified to participate in Medicare and Medicaid programs meet current life and fire safety standards.

*Narrative:*

During the year 93 sets of drawings and specifications for alteration, addition, and new construction of hospitals, nursing care facilities, public health centers, and mental health centers were reviewed. One hundred forty consultations were made to assist facility personnel with design and planning problems.

All hospitals and skilled nursing facilities electing to participate in Medicare and Medicaid programs were surveyed and met life and fire safety standards. Forty follow-up visits were made to insure that recommended corrective actions to improve fire safety had been completed.

*Objective:*

To certify 100% of facilities electing to participate in Medicare and Medicaid programs which meet conditions of participation.

*Narrative:*

Each hospital, nursing care facility, independent laboratory and home health agency desirous of participation was surveyed for certification purposes. At least one follow-up visit was made in the year. These activities are indicated below:

TABLE V — CERTIFICATION OF ACTIVITIES, CONDITIONS OF PARTICIPATION

Type Facility	No. Facilities Surveyed	No. Facilities Certified
Hospitals.....	75	75
Skilled Nursing Facilities.....	81	81
Intermediate Care Facilities.....	62	51
Laboratories.....	16	15
Home Health Agencies (Independent).....	1	1
Home Health Agencies (Subunits).....	13	13
	<u>248</u>	<u>236</u>

The large increase in survey and certification activity for intermediate care facilities was caused by a change in federal requirements. Prior to March 1974 any intermediate care facility that was licensed by the state was considered certified for participation in the Title XIX program by virtue of that license. However, on January 17, 1974, "Criteria and Standards for the Certification of Intermediate Care Facilities" were published by the federal government and the required process of survey and certification began in South Carolina in March 1974.

One medical laboratory surveyed did not meet the requirements for certification.

Each hospital, nursing care and intermediate care facility was inspected and subsequently licensed. Mental hospitals, federally operated hospitals, and those infirmaries maintained by privately owned educational institutions for the exclusive use of their student bodies are, however, not subject to licensing by this agency. Licensing activities are indicated in Table VI.

TABLE VI — LICENSING ACTIVITIES

Type Facility	No. Inspected & Licensed
General Hospitals.....	79
Specialized Hospitals.....	1
Institutional General Hospitals.....	3
Institutional General Infirmaries.....	6
New General Hospitals.....	1
Class I Nursing Care Facilities.....	78
New Class I Nursing Care Facilities.....	4
Institutional Nursing Infirmaries.....	2
Institutional Nursing Care Facilities.....	1
Institutional Minimum Nursing Care Facilities (State Owned).....	3
Nursing Care Facilities (State Owned).....	2
Intermediate Care Facilities (ICF).....	25
New Intermediate Care Facilities.....	1
ICF Identifiable as part of a Nursing Care Facility.....	34
Institutional ICF.....	1
Acupuncture Clinics.....	5
	<u>246</u>



In addition to the annual licensing inspection of each health care facility, a program of inspections on an interim basis was carried out in those facilities where such inspections were warranted. In an effort to upgrade housekeeping practices, 94 environmental control in-service sessions were conducted. Such areas as laundry operation, and storage of clean and soiled linens, were covered.

*Objective:*

To license and/or issue temporary permits to all hearing aid dealers who apply and who meet requirements of the Hearing Aids Act.

*Narrative:*

As of the end of the fiscal year there were 72 licensed dealers. There were also 12 temporary permit holders who were in a training program under the supervision of a licensed dealer.

One hearing aid dealer examination was administered during the year, with five of nine applicants successfully completing both the written and practical portions of the examination.

## LABORATORIES

*Mission:*

To provide adequate, accurate, and reliable laboratory services in support of the personal and environmental health delivery systems of South Carolina.

Support is provided to all programs, consultative activities, special projects, and health supportive services of the agency requiring laboratory services. Additionally, support is provided to private physicians of South Carolina and to the public.

*Significant Activities:*

In addition to continuing to provide support for agency programs, the Laboratories undertook several specific tasks, most of which were successfully accomplished.

Support for the agency's Division of Occupational Health was established. The agency's laboratory is the first state laboratory in the south-east, and the fifth state laboratory in the nation, to achieve accreditation to perform examinations for OSHA.

Clinical chemistry tests performed for patients of Multiphasic Screening Clinics were automated. These tests are also provided to patients at the State Park Health Center.

The planned task of implementing the Laboratory Licensure Act (32-905) was not completed because rules and regulations were not

ready. The delay is due to attempts to conform to pending federal legislation so as to be eligible for federal funding.

The total laboratory examinations performed are shown below:

TABLE I — TOTAL LABORATORY EXAMINATIONS

Type of Examination	Central Lab	District Lab	Total Lab
Bacteriology .....	12,738	5,093	17,831
Gonorrhea .....	(132,828)	(93,090)	(225,918)
Cultures .....	132,502	90,200	222,702
Smears .....	326	2,890	3,216
Mycobacteriology .....	63,410	2,833	66,243
Mycology .....	24,552		24,552
Virology .....	(61,752)		(61,752)
Rubella Serology .....	43,041		43,041
Other Serology .....	6,521		6,521
Hepatitis Assoc. Antigen .....	442		442
Isolations .....	10,939		10,939
Rabies .....	809		809
Parasitology .....	20,766	146	20,912
Immunology .....	31,290	2,948	34,238
Syphilis Serology .....	205,454	32,849	238,303
Chromosome Analyses .....	83		83
Phenylketonuria .....	42,129		42,129
Hemoglobinopathies .....	30,610		30,610
Exfoliative Cytology .....	410*		410
Hematology .....		72,001	72,001
Immunohematology .....		2,090	2,090
Clinical Chemistry .....		66,881	66,881
Urinalysis .....		71,509	71,509
Miscellaneous Clinical Tests .....		6,765	6,765
Dairy Products .....	40,004	17,407	57,411
Water Bacteriology .....	(28,623)	(30,396)	(59,019)
Drinking Water .....	23,669	20,452	44,121
Swimming Water .....	4,954	6,023	10,977
Oyster Bed Water .....		3,921	3,921
Water Chemistry .....	(105,253)		(105,253)
Drinking Water .....	42,204		42,204
Environmental Monitoring .....	63,049		63,049
Food .....	1,741	402	2,143
Toxicology (Drug Screen-Urine) .....	7,353		7,353
Special Chemistry (Pesticides) .....	2,012	7,192	9,204
Heavy Metals (Blood leads) .....	21,048		21,048
Occupational Health .....	6,463		6,463
Totals .....	838,519	411,602	1,250,121

\* Tests begun February 1975.

The number of examinations performed in FY 1975 increased 6.1% over the previous fiscal year with significant changes occurring in several areas. The blood lead program was accelerated resulting in a 49% increase in the laboratory examinations performed to support this program. Of the samples submitted for analysis 25% had elevated lead levels (40 ug/100ml or greater). Rubella serologies decreased 27% dur-



ing the past fiscal year. This is a reflection that several private laboratories throughout the State are now performing this examination for the physicians of South Carolina. A decrease of 20% in syphilis serology is also a reflection of the availability of this test for physicians at private laboratories. This is a result of the Bureau of Laboratories' Laboratory Improvement Section placing emphasis on training laboratory technologists in the State to perform these tests.

In comparison with FY 74, there was a decrease of 30% in the stool examinations for intestinal parasites and a decrease of 41% in the blood specimens screened for hemoglobinopathies. This is due to the change in emphasis of both of these programs from one of screening to a program of education.

During May and June, there was an increase in the number of ticks submitted for detection and identification of the rickettsial agent responsible for Rocky Mountain Spotted Fever. In June 1975, the Immunology Section assumed full responsibility for tick identification and preparation of laboratory material which previously had been performed by personnel of the Division of Vector Control.

To expand laboratory support provided to the Bureau of Adult Health, a cytology section was established in February 1975. Pap smear examinations for the early detection of genital cancer are now available to a greater number of South Carolina women.

Rabies continues to be a problem in South Carolina. Of 809 animal heads submitted to the Bureau of Laboratories, 11 were infected with the virus of rabies. There were 9 bats from various counties, 1 raccoon from Jasper County and 1 red fox from Laurens County. This is the first rabid fox identified in South Carolina since 1960.

Training activities are shown in the following three tables.

TABLE II — BENCH TRAINING AT THE BUREAU

Section	No. of Students	Total Trainee Days
Gonorrhea .....	1	1
Bacteriology .....	2	2
Immunology .....	0	0
Mycology .....	0	0
Virology .....	0	0
Parasitology .....	4	8
Mycobacteriology .....	0	0
Milk Laboratory .....	0	0
Total .....	7	11

TABLE III — PROFICIENCY TESTING

Program	No. of Labs Participating	No. of Shipments	Total No. of Specimens Shipped
Bacteriology . . . . .	61	4	1,281
Mycology . . . . .	28	4	476
Parasitology . . . . .	66	4	1,386
Syphilis Serology . . . . .	98	6	7,840
Rubella Serology . . . . .	10	2	150
GC (District Labs) . . . .	6	3	72
Total . . . . .	269	23	11,205

TABLE IV — BUREAU TRAINING COURSES AND SEMINARS

	No. of Students	No. of Course Days
Central Laboratory . . . . .	229	33
Field Courses . . . . .	0	0
Total . . . . .	229	33

### MEDICAL LIBRARY

#### *Mission:*

To provide the library resources and reference materials needed by agency's staff members.

#### *Significant Activities:*

The librarian prepared research bibliographies, secured interlibrary loans and Medline searches upon request, circulated the table of contents of the 150 journals received in the Library to the professional staff, circulated resources to staff, and ordered, classified and cataloged books.

### LIBRARY ACTIVITIES

No. Resources circulated to staff . . . . .	2,047
No. Interlibrary loans secured . . . . .	301
No. Additions classified and cataloged . . . . .	249
No. Table of contents xeroxed and sent to professional staff . . . . .	567
No. Bibliographies compiled . . . . .	8
No. Medline searches secured . . . . .	7
No. Journal subscriptions received . . . . .	152

The library's holdings consist of 2,700 books (including government publications) and 1,639 bound journal volumes.

### NARCOTIC AND DRUG CONTROL

#### *Problems:*

Drug abuse causes physical and psychological dependency and can contribute to malnutrition, serum hepatitis, and indirectly, through prostitution to support drug habits, to the spread of venereal diseases.



Frequently criminal activity is a result of the abuser's desire to obtain addicting drugs.

Misbranding and adulteration of drugs and devices can result in ineffective treatment of a given condition, and serious side effects due to toxic substances, or the improper use and application of devices.

*Objective:*

During FY 75 to maintain a zero rate of increase in the incidence of diversion or leakage to unauthorized persons of controlled substances attributed to poor control on the part of legal registrants.

*Narrative:*

Selective enforcement procedures, which were adopted in FY 1974 because of a lack of adequate funding, were continued into FY 1975 for the same reason. This action has resulted in partially effecting a closed distribution system for controlled substances at the registrant level.

As seen in Table I, the number of registrants of all types, except physician groups, increased from the previous fiscal year. Inspections, while considerably short of the 1,000 planned, did increase appreciably from FY 74 with several additions to the types of registrants inspected. In addition, 17 audits were made.

TABLE I — NUMBER OF REGISTRANTS AND INSPECTIONS BY TYPE REGISTRANT

Registrant (Type)	Number of Registrants	Number of Inspections
Pharmacies .....	752	488
Physicians .....	3,145	17
Physician Groups .....	11	2
Osteopaths .....	9	0
Dentists .....	813	12
Veterinarians .....	196	16
Distributors .....	16	4
Manufacturers .....	5	3
Hospitals/Clinics .....	183	13
Teaching Institutions .....	9	0
Researchers .....	17	1
Analytical Laboratories .....	8	1
Eclectic Physicians .....	1	0
Podiatrists .....	14	0
Total .....	5,179	557

The number of inspections and audits were below desired levels due to insufficient manpower and budget.

Thefts have increased for the past three years.

## NURSING

*Mission:*

To provide overall direction and coordination for nursing services. To participate in general policy and program development.

*Significant Activities:*

Throughout the year the central office nursing staff focused its efforts on several planned tasks. One such task involved the establishment of written standards for nursing service and practice.

Another continuing task has been to improve the nurse to population ratios of those employed by the Department of Health and Environmental Control (DHEC) in all of the health districts. Although the national standard ratio of one nurse per 2,000 population has not been attained, significant improvement has been reached in ten districts, as indicated below.

TABLE I — REGISTERED NURSE-POPULATION RATIOS  
EMPLOYED BY DHEC, BY DISTRICTS

Districts	Estimated* Population	FY 1974		FY 1975	
		Number R.N.'s	Ratio R.N./Pop.	Number R.N.'s	Ratio R.N./Pop.
Appalachia I .....	155,500	24	1:6479	34	1:4574
Appalachia II .....	324,800	72	1:4511	72	1:4511
Appalachia III .....	256,100	47	1:5449	55	1:4656
Catawba .....	167,300	41	1:4080	47	1:3560
Central Midlands .....	398,400	60	1:6640	70	1:5691
Low Country .....	111,200	31	1:3587	50	1:2224
Lower Savannah .....	219,000	56	1:3911	69	1:3174
Pee Dee .....	269,000	75	1:3587	96	1:2802
Trident .....	353,400	60	1:5890	77	1:4590
Upper Savannah .....	159,800	34	1:4700	36	1:4439
Waccamaw .....	149,200	29	1:5145	31	1:4813
Wateree .....	162,300	45	1:3607	59	1:2751
TOTAL .....	2,726,000	574	1:4749	696	1:3917

(\* Estimated as of July 1, 1973)

There are 126 complete nursing teams now operating in the twelve health districts.

On January 1, 1975 a total of 937 nursing personnel were employed by DHEC including 717 registered nurses, 75 licensed practical nurses, 47 home health aides, 72 community health aides, and 26 nursing assistants. This is an increase of 122 from the same period a year ago.

Nurses with different levels of knowledge and skills are needed to perform the increasingly complex tasks required in the current health care delivery system. Education and experience levels are two measures of the adequacy of the nursing staff. As can be seen in the following table, a slight improvement in educational level did occur.



TABLE II — EDUCATIONAL PREPARATION OF REGISTERED NURSES EMPLOYED BY DHEC AS OF JANUARY 1973 AND 1975

	Jan. 1973	Jan. 1975
Percent with Graduate degrees .....	4%	4%
Percent with Baccalaureate degrees .....	14.5%	19%
Percent Qualified Nurse Practitioners .....	*NA	6%
Percent with Diplomas .....	61.9%	68%
Percent with Associate Degrees .....	7.3%	9%

(\* Not Applicable)

Standards of nursing service and practice were monitored by means of site visits to all twelve districts and through quarterly reports on all nursing services in the districts.

Sample record audits were also conducted in all health districts. A sample of records from all program areas was audited in one district for the purpose of developing an adequate tool for conducting nursing audits across program lines in the community setting.

Three training tasks were undertaken with two being fully implemented. Joint continuing education programs were established with three universities and continuing education in team leadership was provided to 111 RNs. All new RN staff members (73) were trained in public health concepts.

A total of 17 inservice programs were conducted on nursing process; three on the consultation process; four on mental health and public health; two on professionalism in nursing; one on systems theory; one on tuberculosis and alcoholism; one on cardiac pulmonary resuscitation; and one on communications.

The task of revising time and activity forms and home and office visit forms was completed; 600 persons were trained in their use. As programs grow in number and complexity, coordination of nursing service becomes more important and more complex. Central Office nursing staff meetings are held on a monthly basis with interim problem solving sessions as indicated.

There was an increase in the number of meetings to represent the agency. This increase can largely be attributed to work in the development of the public health nursing component with the School of Public Health at the University of South Carolina and the Family Nurse Practitioner Program at Medical University of South Carolina; and the development of a pilot, collaborative project with the Department of Mental Health.

Representatives from the Office of Nursing continued to serve on regional and national committees. Professional papers were delivered at one international meeting, three national meetings, two regional meetings, and several state meetings.

## NUTRITION

### *Mission:*

To coordinate, strengthen, plan, set standards, and monitor for quality in nutrition services in all agency programs which have a nutrition component.

### *Significant Activities:*

Considerable activity was undertaken in an effort to recruit qualified nutritionists for vacant positions. Although five qualified applicants for district nutrition positions were identified, only one of the four positions was successfully filled. Again the agency was hampered by a lower salary scale than that offered in most other states.

The special supplemental food program for women, infants, and children (WIC), which had been the responsibility of the Director of Nutrition, was transferred to the responsibility of the Bureau of Maternal and Child Care in November, 1974.

Two Nutrition staff meetings, which were designed to provide some inservice education, review services and set priorities, were conducted.

Considerable activity was undertaken to revise nutrition data summary sheets and to analyze the data summary sheets for program directors so as to evaluate the effectiveness of nutrition services. Some fifty-five reports of nutritionists' monthly activities were also reviewed.

Planned internal administration changes considerably hampered this supportive service during this fiscal year and resulted in a general lack of information and coordination of services.

## PERSONNEL

### *Mission:*

To provide personnel services to all units of the agency and to conduct the internal personnel administration of the agency.

### *Significant Activities:*

In addition to providing normal personnel support to all agency activities two specific tasks were undertaken this year.

One task was to complete by mid-year an internal review of procedures and activities with a view toward increasing the speed of processing and the quality of service. These reviews were conducted and completed on schedule. As a result of these surveys, duplication of several internal forms were found to be unnecessary. Mail procedures were also changed resulting in improved response and cost-savings. Plans for automating the leave procedures also resulted.

The second specific task was to reduce personnel vacancies by 20% by the end of the fiscal year. The hiring freeze, imposed during the year by the state as an economy measure, made this task impossible to ac-



comply. However, vacancies as carried in the personnel system were reconciled with those in the budget system (i.e. budgeted and funded) so that future action in this area will be on a firm footing.

The following table shows routine activities this fiscal year:

### PERSONNEL ACTIVITIES

*Appointment:*

Number of employees at beginning of period .....	2,859
Number of promotions during period .....	573
Number of employees at end of period .....	3,255

*Recruitment:*

Number of budgeted vacancies at end of period .....	323
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*Classification:*

Number of classes at end of period .....	302
Number of classes revised during period .....	8
New classes established .....	17

*Compensation:*

Number of classes with salary revision during the period .....	40
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*Layoffs and separations:*

Number of separations during the period .....	765
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### SOCIAL WORK

*Mission:*

To coordinate all social work activities of the agency and to integrate social work services into appropriate components of the health planning and delivery system.

*Significant Activities:*

Social work activity was as follows:

No. Direct Services .....	18,833
No. Interviews .....	18,041
No. Home Visits .....	4,271
No. Referrals .....	3,389
No. Consultations .....	4,461

Support activity increased over FY 74 because of several factors, among which were an increased staff, better organization at the district level, better utilization of staff time, and more accurate reporting. Consultations did not follow this upward trend because of increased demand for direct service intervention, including home visits, and increased participation by social work consultants in the districts' staff development activities.

Efforts to increase the social work staff continued throughout the year and met with some success. A district director of social work was employed in Central Midlands District and another has been identified

for the Upper Savannah District, to be hired early in FY 76. Three social work students on agency stipend completed their Master of Social Work degree and were employed, one in Central Midlands, one in Pee Dee and one in Trident District. The number of social workers now employed by the agency is as follows:

Type Degree	Number
MSW .....	42
BA .....	<u>13</u>
TOTAL .....	55

### VITAL RECORDS

#### *Mission:*

To collect baseline health related data on a routine basis by legal registration and statistical recording of vital events of birth, death, fetal death, marriage, divorce and annulment. To provide certification of these events upon request to the public at large.

Upon request, medical and health information is provided for conducting epidemiological and medical research to all personal health programs, emergency medical services, consultative activities, supportive services and special projects within the agency, numerous other government agencies and the public.

#### *Significant Activities:*

Data entry of birth records from 1915 through 1964 (a total of 641,227 documents) was completed during the year.

All current year records (approximately 135,000) were microfilmed on schedule during the year. A backlog of birth records for 1943, 1944 and 1945 were renumbered and refilmed in order to make uniform the state numbering series. Additionally approximately 48,000 amended and corrected records were prepared for filming and filmed. The assigned task of microfilming 404,000 records was only 85% completed because of the complexity of data preparation not anticipated at the outset of this project.

To maintain and improve standards and timeliness, quarterly district meetings with vital records personnel in the county health departments were held throughout the year. Contact was made with the Deputy County Registrars, funeral directors and medical records personnel from hospitals and nursing homes through these district meetings to promote awareness of the need of complete, accurate, and timely registration. A statewide, two day seminar was held for Deputy County Registrars at which forty of the forty-six counties were represented and latest methods in use for registration and problem-solving were discussed in depth. Due to the number of physicians, funeral directors,



medical records personnel, and others involved throughout the state in completing vital records before they are registered, results are slow in coming. Constant contact by mail, and, in person when possible, are required in this area.

The agency has continued to provide the National Center for Health Statistics with data containing less than 2% input error. One month the data was 100% error-free.

Personnel of the Biostatistics Branch continue to work with personnel of the University of South Carolina and several other state agencies to develop a population projection model for South Carolina.

Selected statistics related to this supportive service are indicated in the following two tables.

TABLE I — VITAL EVENTS, CY 74

Event	Number	Percent Change From CY 1973	Rates <sup>1</sup>
Live Births .....	48,432	-1.0	17.4
Premature .....	4,401	-0.1	90.9
Illegitimate .....	8,811	+0.4	181.9
Deaths—All Causes .....	24,169	-2.8	8.7
Fetal .....	732	-9.5	15.1
Neonatal .....	727	-3.3	15.0
Maternal .....	10	-44.4	2.1
Infant .....	1,031	-6.7	21.3
Marriages .....	53,009	-6.8	19.0
Divorces and Annulments .....	8,816	+6.7	3.2

<sup>1</sup> Rates for births, deaths, marriages, and divorces and annulments calculated per 1,000 provisional population estimates for 1974 (2,784,000) published in *Current Population Reports*, Federal-State Cooperative Program for Population Estimates, Bureau of the Census, Series P-26, no. 108.

Infant, neonatal and fetal death rates per 1,000 live births. Premature and illegitimate birth rates per 1,000 live births. Maternal death rate per 10,000 live births.

TABLE II — VITAL STATISTICS ACTIVITIES, FY 75

	Number	Percent Change From FY 74
<i>Total Certificates Filed*</i>	(131,798)	-1.8
Births .....	46,675	+0.4
Deaths .....	23,886	+0.2
Fetal Deaths .....	702	-4.5
Marriages .....	51,662	-5.9
Divorces and Annulments .....	8,873	+7.6
<i>Total Records Queried</i>	(4,255)	0.0
Births, Deaths and Fetal Deaths .....	1,742	-7.0

Marriages .....	429	-29.8
Divorces and Annulments .....	2,084	+17.8
<i>Certification Services</i>		
Completed Requests .....	(102,987)	+12.2
Adoptions .....	2,083	+3.2
Court Orders .....	1,401	+21.2
Legitimations .....	1,724	+2.4
Corrections .....	9,568	+50.0
Delayed Certificates .....	2,702	+32.8

\* The figures are taken from monthly activity reports; therefore do not necessarily refer to current figures for events occurring in the specific period.

## ADDICTIONS PROJECT

### *Problem:*

Based upon nationwide statistics, approximately 138 of the agency's 2,600 employees are affected by the use of alcohol, which in turn decreases their work performance. Additionally an indeterminate number of employees' work performance is reduced by other personal problems.

### *Objective:*

By the end of the 3rd quarter, FY 75 to identify the estimated 138 agency employees who are adversely affected by the use of alcohol.

### *Narrative:*

During the year a total of thirty employees with problems affecting their work performance were identified. Failure to achieve even 25% of the objective is a reflection, in large part, of a reluctance on the part of supervisors to accept agency policy in this matter. Efforts are being made to correct misconceptions regarding the purpose of this project.

### *Objective:*

By the end of FY 75 to have referred all identified suspected alcoholic employees to a helping resource (the Counseling and Referral Elective Center — C.A.R.E.; the Area Mental Health Center; the Agency's Medical Advisor; or a private physician).

### *Narrative:*

Of the thirty employees who were identified, twenty-four (80%) went for counseling. Others chose to make private efforts to deal with their problems without professional help.

### *Objective:*

To instruct all supervisors, by the end of FY 75, of their responsibilities in this project.



*Narrative:*

The training of supervisors has lagged badly, with barely 50% of the 400 supervisors being instructed regarding this project. This can be attributed to a lack of interest and the aforementioned reluctance to follow agency policy in this regard. Training sessions will, however, be conducted on the basis of two a month until all supervisors have been reached.

*Objective:*

By the end of 1st quarter, FY 75, to initiate a treatment or therapy program for alcoholic tuberculosis patients in the State Park Health Center.

*Narrative:*

This project for alcoholic tuberculosis patients is in operation at the State Park Health Center, with a capacity patient load of twenty-five. A waiting list has been established.

## CANCER CONTROL

*Problem:*

Despite recent advances in medical procedures, an estimated 3,500 persons, 33 per cent of whom will be medically indigent, will die of cancer each year, a sizeable percentage because of failure to detect the disease early and to treat and follow-up those diagnosed. In addition an estimated 6,300 persons will develop new cases of cancer with approximately 2,058 being medically indigent.

*Objective:*

Among the medically indigent, examine 2,000 persons for differential diagnosis of cancer.

*Narrative:*

Even though a backlog of cases awaiting examination was carried over from FY 74, the objective was not met. Rising costs and insufficient operating funds cut short the number of persons who could be handled.

TABLE I — CANCER CLINIC ACTIVITIES

No. new patients referred by physicians .....	1,684
No. new patients admitted for services .....	1,543
No. found to be non malignant .....	587
No. patient visits .....	20,503
No. of outpatient services* .....	31,580
No. patients hospitalized .....	767
Total hospital days .....	5,321
Average no. of days hospitalized .....	6
Average cost/hospital day .....	\$122

(\* Includes x-rays, laboratory procedures, biopsies, pap smears, radiation and chemotherapy.)

As expected, the cost of hospitalization again increased.

Early detection of cervical cancer has been promoted through the districts and counties by means of pap smears. The in-situ and localized figures in the following table are indicative of increased early detection.

TABLE II — NEWLY REPORTED CASES BY STAGE  
OF DISEASE, CY 1974

Stage at Diagnosis	Number	Per Cent
In-situ .....	114	2.0
Localized .....	2,967	52.7
Regional .....	1,590	28.2
Remote .....	842	14.9
Unknown .....	113	2.2
Total .....	5,626	100.0

*Objective:*

To treat 1,500 medically indigent persons with newly diagnosed cancer.

*Narrative:*

Of the 1,543 new patients for whom diagnostic services were provided, 587 were found to be non-malignant. The remainder, as well as 292 others, were provided treatment.

The number of new and old cases seen and followed in the State Aid Cancer Clinic system is indicated below.

TABLE III — PATIENTS SERVED BY CANCER CLINICS

Location	Clinic	Private	Total
Anderson .....	528	2,193	2,721
Baptist .....	511	2,071	2,582
Greenville .....	542	4,086	4,628
Medical University .....	2,002	2,600	4,602
McLeod Memorial .....	980	1,296	2,276
Orangeburg Regional .....	196	1,042	1,238
Richland Memorial .....	775	1,049	1,824
Self Memorial .....	77	1,320	1,397
Spartanburg General .....	519	2,540	3,059
Total .....	6,130	18,197	24,327

## CHILD EVALUATION

*Problem:*

There are an estimated 13,415 retarded children (3% of children) under nine years of age in South Carolina who need to be identified, verified and properly placed. Additionally the approximately 26,000 parents of these retarded children need counseling.



*Objective:*

During FY 75 to provide a comprehensive evaluation of 150 children (new referrals) in the state under nine years of age who are suspected of being mentally retarded in order to help each of these children attain his maximum potential.

*Narrative:*

A comprehensive evaluation of each patient was performed by a multidisciplinary team. The evaluation included medical and social histories, physical examination, auditory and visual screening, metabolic screening, photographic and hand prints, assessment of social and self-help skills, laboratory and x-ray studies as required and intellectual functioning. For each patient a staff team conference was held to coordinate all findings and make recommendations.

By the end of the fiscal year a total of 173 new patients were seen. This was accomplished by fully staffing the clinic and changing the emphasis to new patients.

*Objective:*

To counsel 350 parents of retarded children in order to help them accept and encourage their mentally retarded child and to attain a reasonable adjustment to their individual situations.

*Narrative:*

Following the staff conference on each patient, an interpretation of clinic findings and recommendations to the parents was made. At a later date, home visits were made to follow through with the family. A total of 357 parents were counseled and 117 home visits made.

*Objective:*

During FY 75 to provide follow-up service to 100 previously evaluated patients.

*Narrative:*

Reexamination or retesting of 54 previously evaluated children in need of repeat or follow-up studies was conducted. The change of emphasis to new patients caused the shortfall in achievement of this objective.

*Objective:*

To offer genetic counseling to selected patients and their families.

*Narrative:*

Genetic counseling was offered to 20 patients and to 42 parents.

## CHILD HEALTH MAINTENANCE

*Problem:*

There are an estimated 154,000 children in South Carolina eligible for and in need of public health services. At least one-half are not receiving any kind of service. (Failure to provide care for all those in need contributed to a relatively high State infant mortality rate and in physical, developmental and behavior problems.)

*Objective:*

To provide early periodic screening diagnostic and treatment services (EPSDT), as specified in the contract with the Department of Social Services (DSS), to 39% (35,000) of the Title XIX eligible recipients 0-21 years of age in FY 75 with a view towards identifying children with physical, mental and emotional handicapping conditions and making appropriate referrals.

*Narrative:*

The number in each district receiving EPSDT screening is indicated in Table I.

TABLE I — NO. CHILDREN RECEIVING EPSDT SCREENING

District	No. Screened	Quota	Percent Quota Met
Appalachia I . . . . .	852	755	113%
Appalachia II . . . . .	1,277	1,395	92%
Appalachia III . . . . .	1,692	1,719	98%
Catawba . . . . .	1,344	1,316	102%
Central Midlands . . . . .	2,704	4,475	60%
Low Country . . . . .	2,295	2,773	83%
Lower Savannah . . . . .	4,317	5,061	85%
Pee Dee . . . . .	4,758	4,686	102%
Trident . . . . .	3,258	5,758	57%
Upper Savannah . . . . .	1,931	2,140	90%
Waccamaw . . . . .	2,319	2,510	92%
Wateree . . . . .	3,391	3,133	108%
State Totals . . . . .	30,138	35,721	84%

A "no-show" rate of 29% in the counties reporting this data contributed at least in part to the failure to achieve the objective.

Screening services include history, physical appraisal, Denver Developmental Screening Test if indicated, laboratory tests, immunizations, vision and hearing, and sickle cell testing on a voluntary basis. Services received and percent with abnormal findings are indicated below:



TABLE II — SERVICES RECEIVED

Type	Number	Percent
DDST .....	408	1.35%
Physical Appraisal .....	30,045	99.69%
Sickle Cell .....	1,826	6%
Lead Screening .....	240	0.8%
Immunizations .....	15,991	53%
Parasite .....	15,369	51%

TABLE III — PERCENT WITH ABNORMAL FINDINGS

Category	Percent
Vision .....	11.5%
Hearing .....	1.95%
Dental .....	49.4%
Sickle Cell .....	0.1%
Lead .....	0.02%
Other .....	44.7%

*Objective:*

To provide child health conference services to 12,000 children in FY 75, at periodic intervals (1, 3, 6, 12, and 18 months and annually thereafter until 6 years old) or as indicated by need.

*Narrative:*

Services provided in the child health conference clinics include vision and hearing tests, tuberculin tests, laboratory tests, immunizations, and Denver Developmental Screening Test. The number served, by district, is shown in the following table.

TABLE IV — NO. PATIENTS SERVED AND NO. CLINIC VISITS TO CHILD HEALTH CONFERENCES, BY DISTRICT

District	No. Served	No. Clinic Visits
Appalachia I .....	487	514
Appalachia II .....	381	492
Appalachia III .....	546	725
Catawba .....	772	952
Central Midlands .....	2,628	3,509
Low Country .....	409	579
Lower Savannah .....	1,461	2,457
Pee Dee .....	927	1,257
Trident .....	6,513	14,708
Upper Savannah .....	888	1,144
Waccamaw .....	781	1,201
Wateree .....	1,200	2,106
State Totals .....	16,993	29,644

The number of individual tests performed is shown below.

TABLE V — NO. SPECIFIC TESTS PERFORMED

Type	Number
Parasite .....	2,964
Tuberculin .....	3,048
Vision .....	2,287
Hearing .....	2,281
Hemoglobin .....	9,792
DDST .....	<u>3,220</u>
State Totals .....	23,592

In some areas the focus in pediatric care is directed toward acute episodic care to the exclusion of preventive and maintenance health care. In other areas, due to the constraints of funds, facilities, and staff, health services are limited to target areas and age groups. The current capacity of district health facilities and staff are reaching the limit.

*Objective:*

To provide Child Health Conference services to 5,000 high risk infants in FY 75, i.e., infants delivered by lay midwives, prematures, infants of mothers who receive prenatal care in the health departments, and infants who are not receiving regular health supervision.

*Narrative:*

Information was not available from the current data collection system.

*Objective:*

To provide pediatric clinic services to 4,000 children in FY 75.

*Narrative:*

Pediatric clinic services were added in three districts during FY 75 so that each health district can now offer pediatric clinic services. The number served in each district is shown below.

TABLE VI — NO. SERVED IN PEDIATRIC CLINIC, FY 75

Appalachia I .....	221
Appalachia II .....	16
Appalachia III .....	373
Catawba .....	36
Central Midlands .....	717
Low Country .....	35
Lower Savannah .....	156
Pee Dee .....	443
Trident .....	<u>2,441</u>
Upper Savannah .....	99
Waccamaw .....	189
Wateree .....	<u>168</u>
State Total .....	4,894



This represents an increase of 1,186 over FY 74. As the demand for health services increases at the screening level there will be an increased need for pediatric clinic services. Many of the patients served do not have an available health resource other than the health department.

## CRIPPLED CHILDREN

### *Problem:*

There are approximately 31,000 children in South Carolina, based on national incidence by statistics, who have single or multiple handicapping conditions, many of which require specialized or long term treatment. If left untreated these conditions may hinder or preclude normal growth and development, may lessen the possibility of becoming productive citizens, or may cause death.

### *Objective:*

During the FY 75 to provide early identification and diagnosis to 1,800 new cases among children with handicapping or potentially handicapping conditions.

### *Narrative:*

As indicated in Table I, services were provided to 2,223 new patients.

TABLE I — CASELOAD

No. of cases open (beginning of year) .....	7,680
Applications received during year .....	2,286
New cases registered .....	2,223
Cases rejected as diagnostically ineligible .....	63
Cases removed from caseload (see Table III) .....	1,678
No. of cases reopened .....	242
No. of cases (end of year) .....	8,467

The increase in caseload can be attributed, in large part, to cutbacks and layoffs in the textile industries and construction businesses. Family income, as well as group insurance medical coverage, has been affected and has caused more families to seek assistance for their children.

There was no appreciable change from last year in the age distribution of newly registered patients. The age group 4-12 years remains the largest single grouping of new patients.

TABLE II — AGE DISTRIBUTION OF NEWLY REGISTERED PATIENTS

Age at Registration	No.	%
1.....	585	26%
1 - 3.....	584	26%
4 - 12.....	767	35%
13 - 20.....	279	13%
Unknown .....	8	
Total .....	2,223	100%

*Objective:*

To provide a full range of accessible treatment and rehabilitative services to 9,300 children with handicapping conditions during FY 75.

*Narrative:*

With clinics functioning in nine districts, services were provided to 8,467 patients during the year (up 10% from FY 74).

Reasons for discharge are indicated in Table III.

TABLE III — REASON FOR DISCHARGE — ALL PATIENTS

Reason for Discharge	No.	%
Medically ineligible .....	245	14.6%
Financially ineligible .....	37	2%
No further treatment indicated under CC Program .....	96	5.7%
Cured condition correction .....	419	24.9%
Discharged to care of another program or agency .....	145	9%
Discharged to private care .....	95	6%
Moved out of state .....	190	11%
Deceased .....	95	6%
Parents request .....	89	5%
Unable to locate .....	51	3%
Over age .....	132	8%
Other .....	84	5%
	1,678	100%

The full range of services provided included not only clinic services but home visits by nurses and social workers, convalescent care, summer camp, and hospitalization. The scope of the program was broadened to include hemophilia and certain metabolic disorders. A Development Disabilities Agency grant was obtained to support visits to homebound handicapped children.

In the summer of 1974 the average cost per day for summer camps was \$134.10, down \$21.61 from the previous year. However, hospitalization costs and convalescent center costs were up.

TABLE IV — ACTIVITIES

No. patients served.....	7,699
No. patient visits by social workers .....	5,484
No. patients provided convalescent care .....	125



No. patients attending summer camp .....	414
No. patients hospitalized .....	1,221
No. days hospitalization provided .....	10,649
No. patients provided clinic services .....	7,089
No. clinic visits provided .....	18,792

*Note:*

This table does not include visits to speech and hearing centers, the Saul Alexander Clinic in Charleston, the William F. Hall Institute in Columbia, or visits to medical consultants' offices.

## DENTAL HEALTH

*Problem:*

The level of dental health among the entire population of the state has much room for improvement. Fully 40% of the population finds it very difficult to obtain any dental service whatsoever, while 20% depends on formalized governmental supported programs for dental services and the remaining 40% receives routine dental care from the private dental practitioner. Many persons in the state have not been exposed to knowledge concerning preventive dentistry, and even many of those who have been exposed are not using it or applying it successfully or correctly.

*Objective:*

Establish a dental care program providing corrective, as well as preventive services, to 1,400 eligible persons in the Pee Dee Health District.

*Narrative:*

A dental care program was established in the Pee Dee Health District and is covered more fully in the Dental Project—Pee Dee report. A total of 1,527 children received corrective services.

*Objective:*

To increase the number of communities fluoridating their water supply systems by four.

*Narrative:*

There were no communities added to the list of those that have controlled fluoridation of their water systems. The cost of the procedure and the hesitancy of the governmental group in the community to make a decision of the procedure are some of the reasons. Fluoridation itself is receiving consideration by the State Legislature as a Bill was introduced during FY 75 for the fluoridation of all municipal water systems in the State.

*Objective:*

To teach preventive dental health programs of plaque control to 22,000 school children.

*Narrative:*

A total of 57,206 dental plaque control kits were made available to dental programs in the State in which there was a formalized program for prevention and children who were unable to purchase the kits by themselves. The requirement prior to making the kits available was that someone with knowledge in the use of these dental kits, such as a dental assistant, a dental hygienist, a dentist, a nurse or a trained individual, must be available and teach the children how to use the kits properly.

A total of 40,138 children were taught plaque control.

*Objective:*

To increase the dental health education effort for the people of the state by 25% in terms of manhours and/or dollars expended by central office personnel.

*Narrative:*

Two health education workshops for about 195 teachers were held in Allendale and Hampton Counties. Dental Health Division personnel participated in these workshops and distributed plaque control kits, educational materials and teaching guides, for the teachers' use in the classroom. In the counties of Kershaw and Lexington, two planning meetings were held with the elementary school representatives. During two sessions at Clemson University and at Columbia College, materials, guides, and plaque control kits were presented to the students and prospective teachers. Dental health lectures and plaque control programs were presented in twelve elementary schools to Program Nurse Specialists and to Crippled Children's Camp counselors.

Almost \$8,000 was spent on the dental health education effort, which was 6% more than planned. Dental health films were shown 669 times to a total of 28,986 persons and 67,243 pieces of educational material were distributed.

*Objective:*

By the end of FY 75 to determine the fluorosis index of continuous resident school children in the natural fluoride areas of Kingstree and Goose Creek.

*Narrative:*

In Kingstree it was determined that a fluorosis index of 0.9 is present at a fluoride level of 2.78 ppm fluoride in the public water system. Also, at this fluoride concentration level, two percent of the children examined exhibited esthetically objectionable dental fluorosis.

Goose Creek was not surveyed during FY 75 as the Southeastern Water System was in operation only for about ten years, with independent water sources for the various subdivisions. It is nearly impossible to



obtain an acceptable history of water intake at present for continuous residents in the area.

Forty manhours were devoted to this effort.

*Objective:*

To determine the oral hygiene level of 1,000 elementary school children in the Pee Dee District.

*Narrative:*

The oral hygiene level of about 1,700 school children was determined in the Pee Dee District. This was done by the use of disclosing tablets, which when chewed left a red vegetable stain on the areas of the teeth where a plaque was still present. The index was determined at the start of the school year, and then again after dental education had been provided. An improvement of approximately 30% in the effectiveness of removal of the plaque was accomplished after the children had been taught the proper oral hygiene techniques.

## DENTAL PROJECT — PEE DEE

*Problem:*

The dentist-population ratio in the Pee Dee Health District is 1:4,175 while state-wide it is 1:3,306 persons. In Florence County, where more than half of the dentists are located, the ratio is 1:2,636 persons, while in Dillon County, the widest ratio is 1:9,613 persons. Clinical facilities are located in the Health Department buildings in Darlington and Florence, but they are not being used. Fluoridation has not been started in 52% of the District's public water systems. It has been estimated that 75% of the families in the District would be considered as dentally indigent. The preventive dental health program currently operated in the Pee Dee Health District is limited by manpower and does not reach all citizens.

*Objective:*

To provide dental corrective services to all eligible first and second grade children at South Elementary and Clio Schools in the respective counties of Dillon and Marlboro.

*Narrative:*

Activities to achieve this objective were late in starting as the mobile dental unit was not available until the second quarter. In addition, some parents would not permit their child to receive dental care in the mobile unit; however, 264 first and second grade children received dental care.

In addition to those 264 children, 510 received services on an emergency basis. A total of 2,603 treatments were provided during 1,131 visits.

*Objective:*

To provide dental clinical care services two and one half days (15 hours) per week at each health department in Darlington and Florence Counties.

*Narrative:*

In the second quarter a dentist was employed on a full time basis. A total of 3,225 treatments was provided to 949 individuals during 1,677 visits at Darlington and Florence Health Departments. Originally the county of Darlington was supporting the services of a dental hygienist. This person became a part of the overall dental program and the county then supported the employment of a dental assistant and supplies for the portion of the clinical time at the Darlington County Health Department. Florence County helped to support the program at their health department by furnishing dental supplies for services rendered.

*Objective:*

To provide dental kits and teach plaque control methods to 20,000 elementary school children and 500 teachers in the counties of Chesterfield, Marion, Marlboro, and Florence.

*Narrative:*

The dental educational program, the provision of dental kits and the teaching of plaque control by the dental hygienists in this program was received beyond all expectations by the school authorities and the community. Many children who received dental kits could now say they had a toothbrush for the first time. Other information is as follows:

No. dental kits provided .....	20886
No. teachers taught plaque control .....	877
No. children taught plaque control .....	22784
PHP average index late in program .....	2.5
Average index state of program .....	3.6

*Objective:*

To initiate a self applied topical fluoride procedure in the first half of FY for all school children in the two elementary schools in Latta and McColl in the counties of Dillon and Marlboro respectively.

*Narrative:*

The use of fluoride mouthrinse for dental caries prevention did not start until the school year was well along in time. In a number of cases parental consent was not given for this activity. It was also decided that only the 4th grade children would be in the program because, based upon research findings and the tooth eruptive schedule, more benefits could be expected. The fluoride mouthrinse was used by 1793 fourth grade children.



## EARLY DISEASE DETECTION

*Problem:*

Chronic diseases account for the majority of deaths in South Carolina and they are also a major cause of or contributing factor to disability. When identified through screening and properly diagnosed by a primary health care agent, the course of chronic disease can be affected favorably by drug control or behavior modification. However, there is no statewide program to detect chronic conditions in the early symptomatic or pre-symptomatic stages.

*Objective:*

During FY 75 to provide Early Disease Detection to 55,750 South Carolinians with target groups and yields of abnormal findings as follows:

	No. to serve	Yield
High Blood Pressure .....	32,750	4,912
Cancer Detection .....	10,000	40
Diabetes Detection .....	5,000	250
Adult Health Screening .....	<u>8,000</u>	<u>2,400</u>
	55,750	7,602

*Narrative:*

As indicated in the following table, the objective for screening was exceeded in each category. The program has been implemented in all but one health district (Waccamaw).

TABLE I — DISEASE DETECTION ACTIVITIES

Type Screening	No. Screened
High Blood Pressure .....	33,543
Cancer .....	15,975
Diabetes .....	14,962
Adult Health .....	8,469

The yield of abnormal findings from each type screening was higher than anticipated. Blood sugar determinations were made in conjunction with the blood pressure screening program.

Table II indicates the number with abnormal findings from the four different types of screening.

TABLE II — FINDINGS

Type Screening	No. Screened	No. With Abnormal Finding	% Abnormal Finding
High blood pressure .....	33,543	6,374	19%
Cancer detection .....	15,975	45	0.3%
Diabetes detection .....	14,962	1,128	7%
Adult Health screening .....	8,469	2,956	35%

Significant abnormalities detected in adult health screening were high blood pressure, cancer, diabetes, hypercholesteremia, obesity, deficient hearing and deficient vision.

### FAMILY PLANNING

#### *Problem:*

As of July 1, 1974 there will be in South Carolina, as estimated by Planned Parenthood World Population, 117,960 women in need of family planning services, 64,823 of whom will not currently be receiving services. There is also an undetermined number of men in need of services. An additional problem is the high dropout rate among females (17.6% in FY 74) which is a deterrent to the program's efforts to increase the total number of women provided continuous family planning services.

#### *Objective:*

To provide comprehensive family planning services to 58,456 females, 1,307 of whom are under age 15.

#### *Narrative:*

Comprehensive family planning services for females include a physical examination consisting of at least inspection and palpation of breasts, axillary glands, abdomen and extremities; blood pressure, weight, height, and pelvic examination; and, laboratory services consisting of hematocrit and hemoglobin, urinalysis, papanicolau smears, culture for gonorrhea and serological test for syphilis. The number of females served, which increased 11.6% over FY 74, is shown by district in Table I.

TABLE I — NUMBER OF FEMALES SERVED BY  
DISTRICT, FY 75

District	*Number In Need	Number Served	Percent Of Need
Appalachia I .....	4,920	1,671	34.0
Appalachia II .....	10,220	4,341	42.5
Appalachia III .....	9,320	4,208	45.2
Upper Savannah .....	6,330	3,087	48.8
Catawba .....	6,140	4,449	72.5



Midlands .....	14,040	8,333	59.4
Lower Savannah .....	10,770	6,328	58.8
Wateree .....	9,620	5,618	50.4
Pee Dee .....	14,720	7,667	52.1
Waccamaw .....	8,880	3,621	40.8
Trident .....	16,830	9,829	58.4
Low Country .....	6,170	4,095	66.4
State Total .....	117,960	63,247	53.6

(\*Figures furnished by Planned Parenthood-World Population.)

The number of patients served was above expectations. This was probably due to the downturn in the economy and the subsequent reduction in buying power. This would make public care more attractive and the need for family planning more evident since families are likely to delay having more children. The number of new patients was 29,283. The number of continuation patients served was 33,964. The number of patients under 15 years of age (758) was also below expectations. This group is less likely to identify themselves as sexually active and so did not seek services at the expected rate.

*Objective:*

To serve 230 females and 20 males who desire sterilization as a contraceptive method.

*Narrative:*

Twenty-nine males and three hundred twenty-eight females were sterilized in FY 75.

*Objective:*

To provide infertility services to 244 couples.

*Narrative:*

Two hundred seventy-four couples received infertility services.

*Objective:*

To reduce the dropout rate from 17.6% for FY 74 to 15% for FY 75.

*Narrative:*

The number (14,466) of delinquent patients was slightly higher than desirable. A study has been made which should lead to a more effective means of reaching delinquent users. The dropout rate actually increased to 20.8%. This increase was anticipated since a large number of inactive patients remained on the master file and it was decided to purge these patients. This accounts for the high dropout rate.

## HEART DISEASE CONTROL

*Problem:*

An estimated 337,103 men and 308,512 women in South Carolina have some form of cardiovascular disease (definite and suspect). Of these approximately 33 per cent are medically indigent (below 125% poverty level).

An estimated 10,910 persons in South Carolina will die of cardiovascular disease in the next twelve months making it the leading cause of death in the state.

*Objective:*

Among medically indigent persons in the state, examine 1,000 persons 21 years of age and over for diagnosis of cardiovascular disease.

*Narrative:*

Seven heart clinics are functioning in various parts of the state. The number of new patients examined was 780. Reasons for this shortfall were: overestimated number of new patients; three pediatric clinics seeing patients up to adolescence; and, lack of funds.

Findings among those examined were as follows:

TABLE I — NEW PATIENTS SEEN IN CLINIC, BY DIAGNOSIS

Diagnosis	Number
Congenital .....	120
Hypertension .....	28
Rheumatic .....	123
Ischemic .....	234
Other Forms, Heart Disease .....	122
Cerebrovascular Disease .....	0
Disease of Arteries .....	5
Other diseases of Circulatory System .....	2
No heart disease .....	146
Total .....	780

There were no significant changes in diagnoses from the previous year.

*Objective:*

Refer for treatment 950 persons 21 and over with diagnosed heart disease.

*Narrative:*

Only 380 patients, 40% of the planned number, were referred for treatment. This low accomplishment is a reflection of a decrease in number of new patients referred and an increase in new patients found to have no heart disease.



*Objective:*

Provide prophylaxis to 150 plus persons 21 and over who may be predisposed to heart disease.

*Narrative:*

Prophylaxis was provided to 761 patients, five times the number planned. This was because more physicians were aware of the availability of prophylaxis for their medically indigent patients, and we now feel the figure 150 plus should have reflected number on a quarterly basis.

*Objective:*

Provide follow-up care to 2,000 persons 21 and over with diagnosed heart disease.

*Narrative:*

Follow-up was provided 2,889 patients.

*Activities:*

Overall heart clinic activities are shown in Table II.

TABLE II — HEART CLINIC ACTIVITIES

Total number patients served .....	1,539
No. old patients served .....	759
No. new patients served .....	780
Total number clinic visits .....	2,970

## HOME HEALTH SERVICES

*Problem:*

Many people have illnesses and injuries that do not require professional services in an institution on a 24-hour basis, but may benefit from professional care on an intermittent basis. It is estimated that 10% of the population over 65 and 0.5% of those under 65 are in need of Home Health Services each year. In South Carolina, this equates to 33,758 persons and is 4.1 times the number of persons who received Home Health Services in FY 73. The estimated need for the service components is as follows: Nursing — 33,758 (100%); Home Health Aide — 8,440 (25%); Medical Social Services — 7,764 (23%); Physical Therapy — 11,140 (33%); Speech Therapy — 2,093 (6.3%); Occupational Therapy — 6,752 (20%); Nutrition — 3,376 (10%).

*Objective:*

To provide Home Health Services to 12,937\* persons in need thereof during FY 75, with services distributed as follows:

Service Component	No. Persons
Nursing Service .....	12,937
Home Health Aide Service .....	1,366
Medical Social Service .....	1,165
Physical Therapy .....	1,466
Occupational Therapy .....	13
Speech Therapy .....	99
Nutrition .....	575

(\*The number of persons to be served during FY 75 is based on the actual number served in FY 73 plus 16% of those in need but not served.)

Table I indicates the number of persons served in each district and the percent of need met. Table II indicates the number of visits made by service component.

TABLE I — NUMBER OF PERSONS SERVED AND PERCENT OF NEED MET BY DISTRICT, FY 1975

District	No. In Need	No. Served	% Need Met
Appalachia I .....	2,111	720	34.1
Appalachia II .....	3,941	1,335	33.9
Appalachia III .....	3,418	1,163	34.0
Upper Savannah .....	2,333	877	37.6
Catawba .....	2,122	793	37.4
Midlands .....	4,649	1,316	28.3
Lower Savannah .....	2,936	1,409	48.0
Wateree .....	1,998	675	33.8
Pee Dee .....	3,471	1,413	40.7
Waccamaw .....	1,773	747	42.1
Trident .....	3,672	1,227	33.4
Low Country .....	1,334	748	56.1
TOTAL .....	33,758	12,423	36.8

TABLE II—NUMBER OF HOME VISITS BY SERVICE COMPONENTS FY 75

Service Components	No. of Visits
Nursing .....	192,131
Home Health Aides .....	26,138
Medical Social Service .....	1,523
Physical Therapy .....	4,271
Occupational Therapy .....	1
Speech Therapy .....	460
Dietary .....	556
Total .....	225,080

Services increased over the previous year because of additional staff and increased productivity. Occupational Therapy decreased due to loss of personnel.



The percentage of persons improving as a result of home health services was 62.1. The remaining 47.9% represents persons whose illnesses were such that an outcome of functional improvements could not be expected, i.e., progressive deterioration or terminal.

## IMMUNIZATION ASSISTANCE

### *Mission:*

To raise immunization levels among infants and children, especially those served in public health departments.

### *Significant Activities:*

The school immunization law was effectively implemented in 39 counties with 97% of first grade and kindergarten pupils holding a full certificate of immunization at the 120th calendar school day.

TABLE I — NUMBER KINDERGARTEN-FIRST GRADE STUDENTS ENROLLED 74-75 SCHOOL YEAR WITH FULL CERTIFICATE OF IMMUNIZATION

	30 Days After School Opened With Full Certificate			120 Days After School Opened With Full Certificate		
	Total Enrolled	No.	Percent	Total Enrolled	No.	Percent
Public .....	67,007	59,546	88.9%	69,768	67,474	96.7%
Private & Parochial .....	8,023	7,207	89.8%	10,944	10,767	98.4%
Private Kindergarten .....	13,234	12,455	94.1%	13,613	12,905	94.8%
Totals .....	88,264	79,208	89.7%	94,325	91,146	96.6%

As noted below planned activities related to the school immunization law were not accomplished. The low percentages of contacts with newspapers, radio and TV reflects the shortage of immunization program representatives in district assignments and the shift toward district responsibility in the preparation of mass media announcements. Visits to private physicians were performed largely in the epidemiologic follow-up of reported communicable disease. Activity was as follows:

No. visits to physicians .....	146
No. visits to school superintendents .....	88
No. visits to elementary school principals .....	588
No. visits to kindergarten directors .....	195
No. contacts with newspapers .....	62
No. epidemiological investigations performed .....	231
No. visits to radio stations .....	40
No. visits to TV stations .....	7

Epidemiological investigations involved large rubella outbreaks among high school students in York, Kershaw, Sumter and Florence Counties. These investigations of rubella epidemics showed no cases occurring among previously rubella immunized children and that the

highest attack rates were among senior high school students. Other epidemiological follow-up included meningitis in Marlboro County, typhoid in Florence, pertussis in Horry and Anderson Counties.

An immunization survey of children attending Early Periodic Screening Diagnosis and Treatment (EPSDT) clinics was conducted. The sample included 385 children who attended clinics at 8 different health departments. The table below presents the immunization status of EPSDT patients compared to the U. S. Public Health Service National Immunization Survey of 1973.

TABLE II — NUMBER OF EPSDT CHILDREN SURVEYED AND PERCENT ADEQUATELY IMMUNIZED FOR SELECTED DISEASES COMPARED TO THE SOUTH ATLANTIC STATES\* (SAS) BY AGE

Age Group	No. EPSDT Children	DPT (or TD)		Polio		Measles		Rubella	
		EPSDT	SAS	EPSDT	SAS	EPSDT	SAS	EPSDT	SAS
<1 .....	24	30.8%	31.5%	30.8%	20.4%	3.9%	9.7%	3.9%	7.6%
1-4 .....	84	60.2%	72.3%	56.5%	59.9%	59.3%	61.4%	62.0%	55.9%
5-9 .....	108	67.5%	84.7%	64.8%	74.1%	68.2%	71.2%	71.2%	65.7%
10-14 .....	169	55.4%	83.9%	38.6%	68.9%	35.3%	59.5%	27.7%	56.2%
TOTAL .....	385	60.5%	77.7%	52.0%	63.1%	51.2%	64.5%	50.7%	60.0%

(\* U. S. Immunization Survey — 1973)

The survey indicates that immunizations are not being routinely administered when patients are seen in clinics and that follow-up appointments for immunizations are not being kept.

The following table indicates the number of children seen in public health clinics with completed immunizations for DTP, Polio, Measles, Rubella and Mumps.

TABLE III — INDIVIDUALS COMPLETING IMMUNIZATIONS BY TYPE OF VACCINE — FY 1975

Age	DTP (or TD)	Polio	Measles	Rubella	Mumps
<1 .....	14,383	13,792			
1-4 .....	13,766	14,595	29,595	30,119	23,624
5-9 .....	9,662	6,943	8,151	9,252	5,994
10+ .....	8,926	1,747	1,263	1,450	1,212
Total .....	46,737	37,077	39,009	40,821	30,830

## MATERNITY CARE

### *Problem:*

An estimated 6,339 women are in need of maternity care. The lack of or inadequate maternity care results in:

- High maternal and infant mortality rates and an increase in the number of premature births.
- Problems relating to labor and delivery.



*Objective:*

During FY 75 to provide comprehensive maternity care to 6,339 maternity patients; of the projected 4,868 new patients, 10% beginning in the first trimester, 75% beginning in the second trimester, and 15% beginning in the third trimester.

*Narrative:*

Comprehensive maternity care, which includes physical examinations, nursing services, nutrition counseling, social work services, as well as assistance in planning for delivery services, was provided to 6,585 patients. Table I indicates the patients served, percent of need met, and clinic visits by districts.

TABLE I — MATERNITY PROGRAM

District	Est. No. In Need	No. Served	Percent Need Met	No. Of Clinic Visits
Appalachia I .....	737	380	51.6	1,413
Appalachia II .....	1,291	168	13.0	733
Appalachia III .....	1,357	119	8.8	576
Catawba .....	927	328	35.4	1,079
Midlands .....	2,237	1,916	85.7	8,088
Low Country .....	1,211	199	16.4	561
Lower Savannah .....	1,829	642	35.1	1,688
Pee Dee .....	2,658	748	28.1	2,240
Trident .....	2,574	689	26.8	3,145
Upper Savannah .....	951	483	50.8	1,749
Waccamaw .....	1,657	537	32.4	2,079
Wateree .....	1,534	376	24.5	1,710
State Total .....	18,963	6,585	34.7	25,061

The number of patients served increased over the previous year by 24%. The downtrend of the economy has likely increased the demand for subsidized care. Of the new patients served, 589 were in the 1st trimester, 2929 in the 2nd, and 1339 in the 3rd trimester.

*Objective:*

To provide delivery service for 1,081 high risk patients and provide needed hospital care to 1,081 selected neonates during FY 75.

*Narrative:*

This is the first year that this part of the program was in operation and three districts are participating. The start-up time was considerably longer than anticipated. Only 47 patients received delivery service and 48 neonates received hospital care.

TABLE II — VITAL STATISTICS RELATED TO MATERNITY,  
CALENDAR YEAR 1974

	Number	Rate
Maternal Deaths* .....	10	2.1
Infant Deaths** .....	1,031	21.3
Fetal Deaths** .....	732	15.1
Premature Births** .....	4,401	90.9
Neonatal Deaths** .....	727	15.0
Live Births*** .....	48,432	17.4

(\* Per 10,000 in live births)

(\*\* Per 1,000 live births)

(\*\*\* Per 1,000 population)

### MIGRANT HEALTH PROJECTS

#### *Problem:*

Each year, principally in May, June, July and August, migrant workers and their families (totaling less than 6,000 persons) work in truck farms and orchards of the state. This group constitutes an essential part of the South Carolina work force. Because of the mobility associated with their work, special problems, unique to this work force, exist in such areas as housing, safety, and health.

At present, specific legal responsibility for addressing the problems of migrant workers is not vested in any agency of the State. The S. C. Department of Labor has assumed responsibility for the problems of migrants and this agency (DHEC) coordinates its activities in migrant health with the Department of Labor.

#### *Objective:*

During the period May through August to give general treatment clinic services to approximately 1,300 farm workers in Charleston, Edgefield, and Beaufort counties who require such care.

#### *Narrative:*

During the period May through August 1974 general treatment clinic services were provided to some 1,679 farm workers in Charleston, Edgefield, and Beaufort counties. The cost per patient served was \$23.

#### *Objective:*

To establish clinic facilities for 1,500 migrants in Aiken, Spartanburg, and Greenville by June 1975.

#### *Narrative:*

Clinic facilities were established for 1,000 migrants in Spartanburg and 229 patients were served. There were no migrants in Aiken and Greenville. The cost per patient served was \$20.



*Objective:*

To promote, through both providers and recipients, better service for migrants.

*Narrative:*

Better service for migrants was fostered through increased inspections by field technicians and by visits into labor camps. Health educators made 8 visits and field technicians visited 64 camps, directly serving 950 persons.

## PARASITES

*Mission:*

To assist in the eradication of pathogenic intestinal parasites in South Carolina.

*Significant Activities:*

The major activities of this supportive service were in education and information, which were the planned areas of primary emphasis. Additionally many materials in such diverse forms as charts, games, posters, decals, bookmarks, and bumper stickers have been developed and prepared for distribution.

In addition to the education and information activities, three limited surveys were designed and conducted as planned with the following results.

County	No. Examined	No. Positive*	No. Treated
Williamsburg .....	418	51	51
Calhoun .....	221	25	**
Fairfield .....	560	19	19
Total .....	1,199	95	70

(\* The criteria for positive parasite infection is the presence of at least one or more of the following parasites: *Ascaris lumbricoides*, Hookworm, *Strongyloides stercoralis*, *Trichuris trichiura*, *Enterobius vermicularis*, *Entamoeba histolytica*.)

(\*\* Information not available since treatment was not done in school.)

The number of persons reached by other aspects of this supportive service during FY 1975 is as follows:

Activity	No. Presentations	No. Persons Reached
Motion picture films .....	1,016	46,067
Educational presentations .....	60	6,743

## SCHOOL HEALTH

*Problem:*

The lack of adequate and appropriate health supervision may result in failure to identify physical, mental, social and emotional handicaps which impair the normal growth and development of school-age children and prevent optimum benefit of school experience.

*Objective:*

To promote and assist in the formation of Joint Health and Education Committees in 4 counties.

*Narrative:*

Only two such committees were formed, one in Orangeburg County and one in York County. Local communities have not yet recognized the need for joint health education committees and have consequently placed no priority in this area. To date even the two committees established have been more informational than functional in nature.

*Objective:*

To promote at least two scheduled meetings per year between school nurses and county public health nurses in each county.

*Narrative:*

A total of 30 meetings were held in 24 of the 46 counties. These meetings, with district nurses, nurses employed by local education departments and representatives of the agency central office participating, have resulted in more cooperative efforts between the departments of education and health departments.

*Objective:*

To establish and implement a system of exchanging health information on specific students (Child Health Conference, Title I, Medicaid) between the school and the health department in each county.

*Narrative:*

There is no reporting method presently established to identify information on specific students. Action has been initiated to use agency forms for communications from the schools.

*Objective:*

To encourage the public health nurses to offer to serve as a resource in health education in all local school districts.



*Narrative:*

In 40 of 92 school districts information on health education is being provided by public health nurses in response to requests. There is no effective reporting mechanism to determine time spent on this activity, but this will be corrected in FY 76.

*Objective:*

To provide an orientation at the state level during 1974-75 school year to nurses newly employed in school health.

*Narrative:*

Of the 92 school districts, 63 sent their nurses to a two day orientation. One hundred sixteen newly employed "school" nurses participated.

*Objective:*

To promote and/or provide at least three inservice programs for nurses in areas related to school health during FY 75.

*Narrative:*

This training was extended to include nurses employed in regional colleges and by local education departments. As a result of increased demand 11 courses were held. These sessions have stimulated interest in joint efforts by health and education personnel.

## SICKLE CELL

*Mission:*

To educate the public about sickle cell anemia and other hemoglobinopathies. To provide counseling services upon referral.

*Significant Activities:*

The primary emphasis of this supportive service is placed upon education. To this end educational materials (sound/slide programs, posters, library packets, fact books, newsletters, pamphlets and information sheets) were developed or purchased for distribution.

Educational activities conducted were as follows:

No. educational programs .....	82
No. persons attending .....	12,338
In-service training for health dept. staff (hours) .....	14
No. attending .....	50
In-service training for community education groups (hours) .....	19
No. attending .....	82

The in-service training was only about one third of the 96 hours planned. This is a reflection of the fact that this assistance is on a request basis.

In addition to the educational and training activities, staff members of this supportive service counseled 387 individuals in local health departments. Additionally 73 outside referrals were accepted for counseling.

Thirty-five home visits were made this year. Emphasis was placed on follow-up and follow-through on those persons found to have sickle cell disease.

## STATE PARK HEALTH CENTER

### *Mission:*

To provide quality hospital treatment and rehabilitation of tuberculosis patients and to house and support other DHEC activities as determined by the Commissioner.

### *Significant Activities:*

Written notice was received that the State Park Health Center received a two year accreditation by the Joint Commission on Accreditation of Hospitals. This is the first time the hospital has received a full two year accreditation since 1969.

Renovation and construction of facilities continued to have an impact on activities at the State Park Health Center. Histology services were unimproved due to the influence of proposed construction. The planned expansion and modernization of the diagnostic x-ray department is still under consideration. Renovation of the operating suite is still under way.

Health Center laboratories activities are reflected in Table I.

TABLE I — LABORATORY ACTIVITIES

Activity Supported	No. Tests
Maternal and Child Care clinics .....	2,420
Multiphasic Screening .....	61,905
Hospital laboratory .....	33,708

TABLE II — PATIENT STATISTICS

Average Daily Census .....	151
No. Patient Days .....	55,119
Average Hospital Stay (days) .....	92
No. Persons hospitalized as of July .....	180
No. Admissions .....	631
TB .....	459
Respiratory .....	98
Atypical Disease .....	10
Other .....	64
No. Discharges .....	564
No. Deaths .....	42
No. Persons treated .....	786



## TUBERCULOSIS AND CHRONIC RESPIRATORY DISEASE CONTROL

### *Problem:*

The most recent data available (FY 72-73) indicates the following adverse situations regarding tuberculosis control in South Carolina.

- 608 new active cases reported;
- 72 Tuberculosis deaths;
- 4.2% of known active cases not on treatment;
- 56% of close contacts (household and non-household) examined not placed on prophylaxis;
- 7.1% of identified suspects without adequate disposition within six (6) months after identification;
- 12.0% of known active cases without recommended bacteriology;
- 13.1% of known active cases with positive bacteriology were not negative within six (6) months;
- 6% of those cases starting treatment do not complete prescribed course of treatment;

Chronic respiratory disease incidence of mortality has increased in past few years. Up to 10% of all hospital admissions have chronic respiratory disorders. Presently one of four major illnesses.

### *Objective:*

To reduce the number of reported new active TB cases for FY 75 to 580.

### *Narrative:*

There were 658 new cases reported in FY 75, which is a 3.5% increase over the 636 new cases reported in FY 74. In Table I below, new cases reported and case rates are shown by district.

In January 1975, the American Thoracic Society's new diagnostic standards and classification of tuberculosis were implemented in tuberculosis treatment and control programs in the United States. Based on present scientific knowledge of tuberculosis, the new classification replaces terms such as "minimal", "advanced", "active", "inactive", and "primary" with concise descriptions of patient characteristics. A patient is now classified by quantifiable measures of tubercle bacilli in sputum and length of adequate chemotherapy. The classification necessitated amendment to policies for reporting and counting new cases of tuberculosis and for retention of and monitoring cases in registers.

TABLE I — NEWLY REPORTED TUBERCULOSIS CASES AND  
CASE RATES BY DISTRICT, SOUTH CAROLINA, FY 75

District	New Cases	Case Rates*	Rank According to Rate**
Appalachia I .....	25	15.9	11
Appalachia II .....	48	14.4	12
Appalachia III .....	53	20.4	7
Catawba .....	29	17.2	10
Low Country .....	20	18.0	9
Lower Savannah .....	65	28.8	4
Midlands .....	96	23.4	6
Pee Dee .....	113	40.6	1
Trident .....	76	30.0	3
Upper Savannah .....	31	19.1	8
Waccamaw .....	56	36.3	2
Wateree .....	46	28.4	5
State Total .....	658	23.6	..

\* Rate per 100,000 population. Provisional population figures as of July 1, 1974 used to calculate rates.

\*\* Rank highest to lowest.

In the first six months of FY 75, only newly reported active cases were counted. In the last half of FY 75, all new cases, including reactivated cases which were reported to have positive bacteriology and/or were taking two or more anti-tuberculosis drugs were counted due to policy changes required by the new diagnostic standards and classification and the new guide for completing Annual Tuberculosis Report (CDC). By the old criteria, there would have been 632 new cases in FY 75 rather than 658.

#### *Objective:*

To reduce the number of TB deaths for FY 75 to 60 and to reduce the number of incorrectly reported death certificates with TB as a cause from 15 to zero.

#### *Narrative:*

During CY 74 there were 72 death certificates which indicated tuberculosis as the cause of death. Eleven of these, reviewed against medical records, were determined to be incorrect and the responsible physicians amended nine to reflect the proper cause of death.

#### *Objective:*

To increase the number of known active cases on treatment from 95.8% to 98% for FY 75. (Standard is 95% on treatment.)

#### *Narrative:*

The change in diagnostic standards and classification does not permit effective measurement of the attainment of this objective. During the



first half of FY 75, by old criteria, 95.2% of *active cases* were on treatment. By the new criteria, in the second half of the fiscal year, 68.1% of *all* cases were on treatment.

*Objective:*

To increase the number of close contacts placed on prophylaxis from 44% to 60% in FY 75.

*Narrative:*

Table II provides information on contacts.

TABLE II — CONTACT DATA BY DISTRICT

District	No. Identified	No. Exam.	% Exam.	% Household Contacts On Treatment
Appalachia I . . . . .	312	284	91.0	17.6
Appalachia II . . . . .	295	270	91.5	55.4
Appalachia III . . . . .	331	321	97.0	41.5
Catawba . . . . .	199	199	100.0	79.8
Low Country . . . . .	119	119	100.0	52.1
Lower Savannah . . . . .	478	433	90.6	72.2
Midlands . . . . .	645	630	97.7	74.9
Pee Dee . . . . .	616	588	95.5	89.6
Trident . . . . .	205*	198*	96.6	43.7
Upper Savannah . . . . .	322	309	96.0	70.8
Waccamaw . . . . .	200	198	99.0	80.8
Wateree . . . . .	<u>445</u>	<u>445</u>	<u>100.0</u>	<u>93.5</u>
TOTAL . . . . .	4164	3994	95.8	70.0

(\* Excludes Charleston County, not reported)

During the year many persons with more casual than close contact were still being counted as non-household contacts. Therefore, it was felt appropriate to determine standards for preventive treatment on the basis of household only as shown by the table. In the future only those persons with exposure adequate to be infected by a new case are to be reported as "contacts", wherever the exposure occurs.

*Objective:*

In FY 75 to increase the number of suspects with adequate disposition within six months after identification from 92.9% to 97%. (Standard is 95% with disposition.)

*Narrative:*

There were 312 suspects with an adequate disposition in FY 75 among 323 identified for a percentage of 96.6. Among those with dispositions, 77 were diagnosed with tuberculosis for a yield of 24.7%.

TABLE III — SUSPECT DATA, STATEWIDE\*

No. suspects identified .....	323
Percent with adequate disposition .....	96.6%
No. diagnosed active tuberculosis .....	77
Yield of new active cases .....	24.7

(\* Excludes Charleston County for 2nd six months)

*Objective:*

In FY 75 to increase the number of known active cases with recommended bacteriology from 88% to 95%. (Standard is 90% with recommended bacteriology.)

*Narrative:*

Again because of changes in diagnostic standards and classification, it is not possible to combine data with respect to this objective for the two report periods of the fiscal year. For the first half of the year 91.7% of *active* cases had recommended bacteriologic examinations. In the second half of the year, 73.2% of *all* register cases had the examinations. The apparent sharp decline in Mycobacteriologic studies in the second half of FY 75 does not indicate a lack of adequate sputum examinations since the figures are not comparable. In the first half only active cases (those really in need of serial sputum examinations) were counted. In the last half all cases in the register were included in the count. For many of these there was no real indication for sputum examinations.

*Objective:*

During FY 75 to maintain the high percent (80.9%) of positive cases who convert to negative within 3 months from date treatment started. (Standard is 75% converting to negative within three months.)

*Narrative:*

There were 310 newly developed cases reported during the first six months of FY 75. One hundred eighty-one had positive sputum. Of that number, 161, or 89.4% converted to negative within three months. Similarly, of the 181 sputum positive cases, 173 converted to negative within six months. Excluding five cases who died and one who moved within the period, the six-months conversion percentage was 98.9.

*Objective:*

To increase the number of known positive cases with conversion to negative within 6 months of date treatment began from 86% to 95% in FY 75. (Standard is 95% conversion to negative within 6 months.)

*Narrative:*

Accomplishment is covered in the preceeding Narrative.



*Objective:*

In FY 75 to increase the number of cases which complete prescribed course of treatment to 96%. (Standard is 95% completing treatment.)

*Narrative:*

In previous reports only the percentage of active cases on drug therapy as of the last day of the period were reported. We have, perhaps falsely, been lulled by the high percentages reported on treatment into a confidence that patients were getting adequate treatment. This confidence is now shattered by the more precise determination currently reported on completion of treatment. Since approximately two years are required for adequate treatment, this is necessarily a retrospective study of those new cases begun on therapy for the six months period beginning two years prior to the last day of current report period. Only 93 out of 285 new cases (excluding 29 in Charleston County for whom data is not available) actually completed treatment — 42.1%. However, treatment is often extended beyond the two years by clinicians, and when the 75 such cases who were still taking prescribed drugs are added to the 93 completed — those with adequate treatment to date, 168, rises to 76.0%. The goal may have been too high, but it is certain that achievement is too low in this top priority objective.

*Objective:*

In FY 75 to refer 50 chronic respiratory disease (CRD) suspects to State Park Health Center.

*Narrative:*

There were 172 admissions for chronic respiratory disease to State Park Health Center during FY 75. Because hospital statistical reports do not reveal source of referral, it is undeterminable how many of the CRD admissions originated from private physicians, health departments, or other agencies, although a reasonable estimate is that 50% were referred from county health departments.

Statewide tuberculosis data is indicated below.

TABLE IV — TUBERCULOSIS DATA — STATEWIDE\*

No. new active cases reported .....	658
New active case rate/100,000 population .....	23.6
Percent new active cases in advanced stage .....	N/A
Total cases on register as of June 30 .....	1,764**
Hospitalized for TB .....	174
In institution, not primarily for TB .....	30
At home .....	1,560
Active cases at home .....	1,560
Percent of active cases at home with recommended bacteriology .....	73.2

Percent of active cases at home on treatment .....	68.1
Percent of total active cases (hospitalized and at home) on treatment .....	71.3
No. tuberculosis deaths .....	63
Tuberculosis death rate .....	2.3
(* Reference to "active" cases is obsolete in FY 75 and data shown represent all cases reported and registered by criteria of new diagnostic standards and classification.)	
(**Only cases that have not completed adequate treatment are now included on the register whereas previously adequately treated cases were retained on the register for 3 years post Rx.)	

## VENEREAL DISEASE CONTROL

### *Problem:*

In FY 1974, seven hundred eighty-seven cases of infectious syphilis and 22,040 cases of gonorrhea were reported, ranking South Carolina 2nd and 3rd respectively nationally.

### *Objective:*

In FY 1975, among South Carolina's 2,784,000 people, this program will reduce by 144 cases the incidence of infectious syphilis.

### *Narrative:*

This objective was not only reached but was exceeded with a reduction of 179 cases being effected. Investigators assigned to the health districts accomplished this reduction by successfully applying several methods, principally: interviewing 99.8% of the cases; bringing to examination within 3 days 58% of the locatable contacts; and, prophylactically treating, within 90 days of exposure, 94% of those negative contacts exposed to lesions.

The following table shows activities accomplished.

TABLE I — ACTIVITIES RELATED TO SYPHILIS — CIVILIAN POPULATION

No. cases infectious syphilis reported .....	608
No. cases infectious syphilis interviewed .....	607
Percent of cases interviewed .....	99.8%
No. cases infectious syphilis reinterviewed .....	584
Percent of cases reinterviewed .....	96%
No. contacts examined .....	1,275
No. contacts examined within 72 hours .....	735
Percent contacts examined within 72 hours .....	58%
No. contacts exposed to lesions .....	435
No. prophylactically treated .....	410
Percent prophylactically treated .....	94%
No. contacts exposed within 90 days .....	863
No. contacts prophylactically treated .....	796
Percent prophylactically treated .....	92%



TABLE II — NUMBER OF CASES OF VENEREAL DISEASE  
REPORTED BY DISTRICT

District	Infectious Syphilis	Total Syphilis	Total Gonorrhea	Total Syphilis and Gonorrhea
Appalachia I .....	7	28	1,350	1,378
Appalachia II .....	95	208	3,442	3,650
Appalachia III .....	14	83	935	1,018
Catawba .....	10	38	947	985
Central Midlands .....	162	401	4,313	4,714
Low Country .....	32	97	395	492
Lower Savannah .....	17	91	1,769	1,860
Pee Dee .....	57	162	1,852	2,014
Trident .....	76	235	3,610	3,845
Upper Savannah .....	36	92	645	737
Waccamaw .....	31	78	698	776
Wateree .....	71	146	1,406	1,552
Not Stated .....			33	33
Military .....	31	64	2,776	2,840
Other V.D. ....				21
Totals .....	639	1,723	24,171	25,915

*Objective:*

In FY 1975, among South Carolina's population, this program will reduce the incidence of gonorrhea by 3,375 cases.

*Narrative:*

As noted in Table II, this objective was not achieved, although until the fourth quarter it appeared to be within reach. Most of the case reduction occurred in the private sector. A small reduction (6 cases) in gonorrhea reported by health department clinics occurred in one district.

The methods used in the pursuit of this objective were: (1) assistance in the culturing of 169,424 females; (2) treating 97% of all females with positive cultures; (3) interviewing 50% of all males with gonorrhea reported from public clinics; and, (4) examining 80% of contacts.

Screening females for gonorrhea in various clinics and private physicians' offices continued to be effective, yielding 8,255 positive cultures for a 4.9% positivity rate.

TABLE III — ACTIVITIES RELATED TO GONORRHEA

No. Clinic Cases Reported—Males .....	10,011
No. Cases Interviewed—Males .....	4,923
Percent Cases Interviewed—Males .....	49%
No. Positive Cultures Among Females .....	8,255
No. Cases Reported—Females .....	7,996
Percent Females With Positive Culture Treated .....	97%

*Health Education:*

The following activities were conducted to promote health education, including venereal disease education.

Schools with meaningful health education programs .....	136
No. of teacher workshops held .....	11
No. of teachers trained .....	700
No. of School Nurse classes .....	7
No. Public Health Nurse workshops .....	6
No. Public Health Nurses trained .....	210
No. adult and community classes .....	365
No. persons attending .....	6,750
No. attending ETV Life Science (7th grade) .....	19,562

## AIR QUALITY CONTROL

*Problems:*

Some sources of air pollution have not attained compliance with standards. Others must be kept under surveillance to assure maintenance of standards. New industrial sources may cause air pollution if uncontrolled. Nuisances such as open burning, odor, etc. require abatement. The public is not fully aware of the consequences of air pollution and of State efforts to control it.

Ambient air quality problem areas must be detected and defined. Present particulate matter emission standards may not be adequate to attain ambient air quality standards in two of the State's ten Air Quality Control Regions.

New stationary sources, recently defined hazardous pollutants and indirect sources of air pollutants, recently promulgated federal programs, should be controlled by the State.

*Objective:*

To insure that all new sources comply with State Standards and that 95% of all existing sources attain or maintain compliance with State Standards during FY 75.

*Narrative:*

All known new sources of air pollution complied with state standards and regulations by obtaining the necessary construction and operating permits. A total of 868 permits were issued and all permit requests which were received were processed.

The objective of 95% compliance by all existing sources was accomplished, with some 2,663 sources being inspected.

During the year the agency successfully assumed the control and operation of air quality control programs in Charleston, Greenville and Spartanburg counties. These programs had previously been locally operated with federal support, but federal support was withdrawn on July 1, 1974.



*Objective:*

To insure that citizens, municipalities and industries comply with open burning, visible emission, fugitive dust and nuisance regulations and standards.

*Narrative:*

The violations observed during FY 75 exceeded those in FY 74 by 28%. Citizen complaints also increased by 34% in this area. This is considered to be a reflection of increased public awareness of legal remedies now available to receptors of air pollution.

*Objective:*

To maintain sulfur dioxide standards in the State's ten Air Quality Control Regions, and attain particulate emission standards in nine of the ten regions by July 1, 1975.

*Narrative:*

Sulfur dioxide standards were maintained in the State's ten Air Quality Regions during the year. Data to be accumulated during FY 76 will determine whether particulate standards were also attained and/or maintained.

## CERTIFICATION OF ENVIRONMENTAL SYSTEMS OPERATIONS

*Mission:*

To certify persons desiring to be registered as a water or wastewater treatment plant operator or as a percolation test technician in accordance with the Mandatory Certification Act of South Carolina and the rules and regulations of the Board of Certification.

*Significant Activities:*

The number of environmental systems operators certified by category is indicated below:

No. initially certified	(567)
Water	154
Wastewater	374
Percolation Technicians	39
No. total certified operators	(3,136)
Water	896
Wastewater	2,040
Percolation Technicians	200

The Board works to insure that all water and wastewater plants are manned with graded operators-in-charge and that all "no-grade" operators who are operators-in-charge are replaced with graded operators when they retire or otherwise leave the position. In this

regard, of the 1,177 wastewater treatment plants the board took 54 administrative actions, with one criminal action being initiated. For the 347 water treatment plants, 4 administrative actions (but no criminal actions) were initiated.

Operators who wish for their certificates to remain in force must renew annually and as indicated in the table above over 3,000 renewals were made.

## DAIRY FOODS AND BOTTLED PRODUCTS

### *Problem:*

More than 466 million pounds of milk are produced annually in the state. Additionally, more than 595 million pounds of milk and milk products were consumed by the citizens of South Carolina during last year. When improperly handled or processed, these products can harbor disease producing organisms including streptococcus, staphylococcus, salmonella, Brucellosis, tuberculosis, hepatitis, virus, etc. The presence of pesticides and antibiotics can create a toxic condition in humans. The consuming public must be protected against adulteration of dairy products by water, pesticides, antibiotics and improper labeling.

Approximately 2 million soft drinks are bottled in the state yearly. Routine inspection is needed to assure a product that is safe for the consuming public.

### *Objective:*

To insure that all dairies and plants meet state standards of operation and maintenance at the Grade A level.

### *Narrative:*

All of the 426 dairies and the 22 plants operated at a Grade A level.

TABLE I — INSPECTION ACTIVITIES

Dairy Farms	
No. dairy farms .....	426
No. routine inspections .....	2,203
Avg. no. inspections/farm .....	5.1
No. follow-up inspections .....	1,095
Avg. no. follow-up inspections/farm .....	2.5
No. permits revoked .....	28
No. permits suspended due to test results of milk .....	56



## Pasteurization Plants

No. of plants .....	22
No. of routine inspections .....	205
Avg. no. inspections/plant .....	9.3
No. follow-up inspections .....	168
Avg. no. follow-up inspections/plant .....	7.6
No. permits suspended due to test results of milk .....	31

*Objective:*

To maintain surveillance of dairy products so that adulterated or improperly labeled dairy products are removed from the market.

*Narrative:*

In order to assure achievement of this objective, extensive sampling was conducted as indicated below:

TABLE II — SAMPLING ACTIVITIES

## Raw Milk

No. samples analyzed .....	7,760
No. tests performed .....	38,800
% tests unsatisfactory .....	1.9%

## Pasteurized Milk

No. samples analyzed .....	3,330
No. tests performed .....	26,640
% tests unsatisfactory .....	3.67%

During the year it was necessary to dispose of 250,390 pounds of milk due either to high standard plate count, high somatic cells, foreign matter, added water, antibiotics, or repeated inspection violations. In addition to the above 155,300 pounds were disapproved for Grade A sales but permitted to be sold to manufacturing plants.

TABLE III — FROZEN FOOD PLANT ACTIVITIES

No. plants permitted .....	7
No. routine inspections .....	41
Avg. no. inspections/plant .....	5.8
No. follow-up inspections .....	33
Avg. no. follow-up inspections/plant .....	4.7
No. samples collected .....	1,458
No. analyses performed .....	5,832
% of analyses unsatisfactory .....	6.2%

TABLE IV — BOTTLING PLANT ACTIVITIES

No. bottling plants permitted .....	40
No. of routine inspections .....	112
Avg. no. inspections/plant/year .....	2.8

Almost 30% more inspections per man were made than planned because of complaints concerning foreign matter in drinks.

## EMERGENCY HEALTH SERVICES

*Problem:*

Adequate plans, facilities and resources do not exist in all parts of the State to insure provision of medical care and preventive health measures, in event of disaster or emergency situations, for approximately 2.8 million citizens of this State, or any portion thereof. There is a lack of a sense of urgency in development and maintenance of adequate plans to cope with disasters and minimize loss of life and property and alleviate suffering.

*Objective:*

Increase by 50,000 the number of individuals trained in Medical Self-Help.

*Narrative:*

This program provides the necessary instructional materials for this course which is presented in the public school system by members of the faculty. There was a considerable shortfall in achieving this objective (only 21,500 individuals were trained in Medical Self-Help). Efforts are being directed toward greater promotion of this training in the schools and the use of this course by civic groups in conjunction with county Disaster Preparedness Programs.

*Objective:*

Insure that Agency responsibilities and capabilities are incorporated in State Disaster Plans (Act #S-128, '73).

*Narrative:*

The state's Operational Readiness and Survival Plan is being compiled, with this agency preparing the Health and Medical Annex.

*Objective:*

Insure by biennial inspection that an emergency medical stockpile of Packaged Disaster Hospitals is available throughout the State and adequate within budget limitations.

*Narrative:*

There are 35 Packaged Disaster Hospitals (PDH) requiring inspection once every two years to insure safe storage, removal of deteriorated items, and general overall care. This year, because of allocation of insufficient man-hours to this project, only 12 PDH's were inspected and inventoried.

*Objective:*

Provide aid in development of county (local) Disaster Plans.



*Narrative:*

Personnel assisted in the revision of the Health portion of two county disaster plans. With the State Disaster Preparedness Plan now being rewritten, considerable updating of county plans will be necessary to conform to the new State Plan.

*Objective:*

Participate and aid in On-Site Assistance Programs.

*Narrative:*

On-Site Assistance (OSA) Programs are scheduled on a four per year basis. To the present, twenty-four have been completed, leaving twenty-two for future completion. During FY 75, considerable assistance was provided by Army Reserve Civil Affairs personnel in achieving this objective.

## EMERGENCY MEDICAL SERVICES

*Problem:*

Timely and properly administered primary medical aid is not always available to individuals, both transients and natives, in South Carolina, who are injured or critically ill as a result of such situations as traffic mishaps; home, farm, recreational and seasonal accidents; and, sudden critical illnesses.

*Objective:*

Establish a management system whereby the central office will function through four area offices, which in turn will coordinate and implement plans through Council of Governments (COG) and regional planning agencies.

*Narrative:*

The requirements for the Management System have been determined and personnel spaces have been authorized. However, no funds have yet been made available.

*Objective:*

During FY 75 to increase the capability of emergency medical services to respond promptly (within thirty minutes) with properly administered care to the needs of the people throughout the State as follows:

Increase the number of ambulances complying with State Standards by 55.

Establish one statewide communication system in consonance with State Emergency Medical Systems Plan.

Categorize 66 hospital emergency rooms on the basis of facilities and personnel available.

Train an additional 800 Emergency Medical Technicians (EMTs).

Conduct a public education campaign to inform approximately 2,800,000 citizens in the state of means to enter health care system, types of services available, and benefits to be gained from system.

*Narrative:*

A total of 62 new ambulances were acquired by local Emergency Medical Services, an increase of 7 more than planned. During March, 1975 Regulations were promulgated which allow all 417 ambulances to meet state standards for design criteria. A survey is now in progress to determine how many of the 417 ambulances have the required medical equipment on board. A lack of resources does not permit on-site inspection to insure accuracy of the survey.

Of the 46 counties, 32 now have effectively operating communication systems. Funds have been awarded to upgrade the systems in the remaining 14 counties during the next fiscal year.

Inspections of 66 hospital emergency departments were conducted during the year by the agency's Bureau of Health Facilities and Services as part of their inspection procedures for the licensing of hospitals. Data derived from the inspections is now being analyzed and categorization criteria is being reviewed. The hospitals that can best serve their areas of responsibility will be identified. Those hospitals not meeting emergency room standards will be assigned the task of upgrading to proper standards.

In addition to training 906 basic EMT's, 396 refresher EMT's were recertified during the FY.

Vehicle deaths and serious injuries in the state decreased 4.66% in FY 75 and a least a portion of that decrease can be attributed to the actions of this program.

## FOOD PROTECTION

*Problem:*

South Carolina's population has become increasingly mobile — resulting in one of every four persons, on the average, eating out each day. The present, as well as the number of new and varied types of food serving and selling operations, present a multitude of potential food-borne disease outbreaks relating to handling, transportation, and storage of food. Additionally, the public has come to demand higher levels of sanitary food production and quality.



*Objective:*

To reduce each county's average demerit score for permanent food service establishments by 10% based on survey results.

*Narrative:*

Permanent food service establishments are surveyed every other year with available manpower surveying retail markets in the intervening years. The survey in FY 73 showed an average demerit score of 31.31. This year's survey showed an average demerit score of 28.82 for a net reduction of 2.49 (or an 8% reduction). The improvement can be attributed to the high quality of food service surveillance and inspection. Exceptional survey scores were achieved in Berkeley (17.42), Pickens (18.97), Laurens (20.94), Dorchester (21.73) and Charleston (22.0). Counties showing the most improvement were Clarendon (47% decrease), Florence (38% decrease), Orangeburg (29% decrease) and Dorchester (32% decrease). Four counties made minimal reductions and one actually increased.

Activities related to this objective were as follows:

TABLE I — FOOD SERVICE ESTABLISHMENT ACTIVITIES

No. establishments permitted .....	6,191
No. routine inspections .....	22,628
Avg. no. inspections/establishment .....	3.7
Avg. demerit score .....	28.82
No. plans reviewed .....	379
No. training sessions conducted .....	85
No. employees trained .....	2,983

Seventeen reported foodborne disease outbreaks were investigated involving 158 persons becoming ill. The majority of the outbreaks involved only a few individuals with the exception of one which exposed 59 persons to staphylococcus food poisoning at a catered bar-b-que banquet. One outbreak required out-of-state coordination with the Georgia Department of Human Resources.

*Objective:*

To insure that new and remodeled retail markets meet minimum construction standards and receive inspections for compliance with regulations governing maintenance and operation.

*Narrative:*

The number of permitted retail markets increased again this year, and related activities, as shown below, also increased.

TABLE II — RETAIL MARKET ACTIVITIES

No. markets permitted .....	3,290
No. routine inspections .....	12,990
Avg. no. inspections/market .....	3.9
No. plans reviewed .....	64
No. employees trained .....	250
Demerit score .....	N.A.

*Objective:*

To insure that all temporary food service establishments meet state regulations and are permitted prior to serving food.

TABLE III — TEMPORARY FOOD SERVICE  
ESTABLISHMENT ACTIVITIES

No. applications received .....	358
No. permits issued .....	355
No. permits denied .....	3
No. routine inspections .....	2,419

*Objective:*

To initiate inspections of vending locations to insure compliance with the "Rules and Regulations Governing the Vending of Food and Beverages".

*Narrative:*

The Vending Program has been initiated in most of the districts with increased inspections noted in the Appalachia Districts. Personnel are becoming more competent in making inspections and have been trained through "on the job" inspections by the Vending Consultant.

## GENERAL SANITATION

*Problem:*

The health of the people can be affected by insanitary conditions associated with individual wastewater disposal systems (e.g. septic tanks), individual water supplies, camps and parks, ice plants, public accommodations, mobile home parks, day care facilities, and nuisances at private and public premises. Additionally, the threat of rabies is a potential health problem.

*Objective:*

To insure that all private and public premises and new installations of private sewage systems are inspected where required and that private water systems are inspected upon request during FY 75.



TABLE I — ELEMENTS REQUIRING ROUTINE INSPECTIONS

Element	No. Inspections
Camps .....	380
Hotels/Motels .....	1,767
Mobile Home Parks .....	7,100
Schools .....	2,244
Ice Plants .....	49
Jails and Penal Institutions .....	321
Total .....	11,861

TABLE II — NON-ROUTINE PROGRAM ACTIVITIES

Subdivision inspections .....	1,509
Individual wastewater:	
No. inspections .....	47,498
No. installations .....	15,406
Individual water supplies:	
No. inspections .....	567
No. samples collected .....	3,667
No. nuisance complaints investigations .....	18,661
No. Day Care/Foster Home inspections .....	2,164
No. all other inspections .....	9,758
Total .....	99,230

Individual wastewater activities and installations decreased appreciably in FY 75 in conformance with the economic situation. There appeared to be a leveling off of the downward trend in June.

*Objective:*

To protect the public from the possibilities of rabies outbreaks during FY 75.

*Narrative:*

A total of 78,195 rabies posters, clinic notices and pamphlets were distributed during the fiscal year through the district offices to advertise the rabies clinics.

TABLE III — RABIES ACTIVITIES

Clinics promoted .....	1,055
Clinics held .....	909
Animals immunized .....	156,570
Rabies investigations .....	741
Animals quarantined .....	3,461
Heads submitted .....	617

The animals immunized include those vaccinated in veterinary offices not previously included.

*Objective:*

To prevent, by the end of the first quarter of FY 75, the installation of unapproved pre-cast septic tanks.

*Narrative:*

A policy has been established, and is enforced, requiring the installation of only approved tanks. So far 47 manufacturers of pre-cast septic tanks have been approved, with 9 being added this year.

## NOISE CONTROL

*Problem:*

Studies show that excessive noise is a hazard to the public's health and welfare. It is estimated that about two out of every three South Carolinians are exposed to an acoustical environment that may lead to physiological and/or psychological stress. Current estimates of up to five percent of school age children and 20% of teenagers with an existing hearing handicap may experience noise induced hearing loss later in life due to excessive acoustical pollution.

Municipal and county noise ordinances are seldom enforced in South Carolina. Most ordinances are basically unenforceable because the standards are subjective rather than quantitative.

*Objective:*

By the end of FY 75 to develop a comprehensive statewide environmental noise abatement plan that will establish the basis and framework for future direction and implementation.

*Narrative:*

The agency was not successful in developing support in the 1975 General Assembly for noise control legislation. Pending the enactment of enabling legislation, which would give the necessary authority to establish state environmental noise control standards and the concomitant enforcement authority, the development of a state noise abatement plan has been postponed indefinitely.

*Objective:*

To respond to all requests received in FY 75 in the state for advice and assistance concerning the problems of noise pollution.

*Narrative:*

Notwithstanding the lack of enabling legislation, the agency has been able to provide advice and assistance. There was a fourfold increase in requests for assistance, due in large part to a growing public awareness of the noise problem and the agency's efforts to develop a state noise abatement plan.



In addition to responding to 68 noise complaints, agency personnel drafted a model municipal/county noise ordinance, and proposed state noise pollution regulations and standards. A comprehensive survey of environmental noise in three communities contiguous to rock quarry operations was also made.

Technical assistance was provided to one city and one county regarding the adoption of a local noise ordinance. Additionally, some 15 environmental assessment studies were reviewed.

The Division of Noise Control is being disbanded until such time as it may be reinstated with adequate enforcement authority and adequate program funds. However, within available resources, noise complaints will continue to be investigated.

## OCCUPATIONAL HEALTH

### *Problem:*

Approximately 1.1 million people of the 2.8 million population of South Carolina are in the work force. Of these, 880 thousand wage and salary workers are employed in about 40 thousand establishments affected by state and federal occupational health laws. Occupational health hazards assume many forms; however, most may be classified as chemical, biological, physical or psychological and most are chronic rather than acute in nature. Major facets of the overall occupational health problem have been the widespread lack of awareness that occupational illnesses are preventable and the readiness to tolerate occupational health problems instead of providing assessment and seeking solutions.

### *Objective:*

During FY 1975 to assess occupational health hazards, in accordance with state standards, by performing 510 inspections in 493 establishments in the public and private sectors in South Carolina employing 90,220 workers. These assessments will be performed under the following priorities:

Complaints from employees (30 complaints, 30 establishments, 5,490 employees)

Target Health Hazard Inspections (50 inspections, 48 establishments, 8,784 employees)

- (1) Cotton Dust (25 establishments, 4,575 employees)
- (2) Carbon Monoxide (10 establishments, 1,830 employees)
- (3) Asbestos Dust (5 establishments, 915 employees)
- (4) Silica (4 establishments, 732 employees)
- (5) Lead (4 establishments, 732 employees)

General Schedule (430 inspections, 415 establishments, 75,946 employees)

*Narrative:*

Activities undertaken to determine compliance with standards are shown in Table I.

TABLE I — COMPLIANCE ACTIVITIES

No. establishments inspected .....	452
No. compliance investigations .....	509
No. workers in these establishments .....	75,223
No. establishments in violation .....	199
No. of violations .....	473
No. of workers with excessive exposures .....	6,687
No. field determinations .....	7,421
No. samples collected .....	1,176
Percent of S. C. workforce receiving services .....	6.8

This expansion of activity was caused primarily by two factors: (1) an increase in manpower, and (2) greater efficiency on the part of the industrial hygienists. Even so, services were provided to only 7% of the state's workforce and the number of workers in plants inspected was less than planned because it was necessary to devote some time to follow-up inspections. Several years growth are still necessary before this program can achieve its goal of evaluating the occupational health hazards of the complete workforce every three years and thereby improve the workers' health and lifespan.

During the year the Occupational Health Laboratory became the first state laboratory in the southeast, and only the fifth nationally, to receive accreditation by the American Industrial Hygiene Association.

*Objective:*

During FY 1975 to provide assistance and advice to both the public and private sectors regarding the medical and technical aspects of occupational health by:

- a. Medical and Nursing consultation (25 establishments — 5,000 employees)
- b. Technical consultation (30 establishments — 6,000 employees)

*Narrative:*

Consultative activities have increased, but they have not been able to keep pace with the requests for services.



TABLE II — CONSULTATIVE ACTIVITIES

No. of visits .....	74
Medical and Nursing .....	39
Technical .....	35
No. of recommendations .....	40
No. of workers .....	36,426
No. of field determinations .....	144
No. of samples collected .....	94

Since the compliance activity is the area of current emphasis, any additional manpower will be utilized there. The consultative services are expected to continue understaffed for another year.

During the year an employee health service was established in this agency which will hopefully be a model for a similar program for all state employees. Services provided included the following:

Service	No. Employees
Health interview, new employees .....	100
Health interview, old employees .....	122
Visits to clinic .....	3,238*

(\*Of this number, 135 were occupational in nature.)

## PRODUCT SAFETY AND INJURY CONTROL

### *Problems:*

Accidents are the leading cause of death in the 1-44 age group in South Carolina, as well as being the fourth leading cause in all age groups. Each year many persons are injured by products used in and around the house, with some being permanently disabled and others killed. The economic and social cost is high.

The development of Product Safety and Injury Control Programs in South Carolina is hindered by:

- a. Lack of data readily available to substantiate injury control needs.
- b. Lack of involvement on the part of county and district Environmental Sanitation personnel in injury control programs.
- c. Lack of a state consumer protection law that established comprehensive authority in any state agency covering all consumer products.

A large quantity of hazardous toys and poisonous products are on the market in South Carolina. Some have caused death among children.

### *Objective:*

Survey existing activities, gather data and determine injury control needs and problem areas affecting people in non-occupational home and school environments in South Carolina during FY 75.

*Narrative:*

By the end of the second quarter of the fiscal year the agency had established personal liaison with all state agencies, independent safety agencies, and safety conscious groups in order to gather and analyze their present involvement and activities in injury control programs for the non-occupational home and school environment. Additionally, seven out-of-state health agencies were contacted regarding their injury control program. It was determined by this survey that no agency or group in the state of South Carolina, other than South Carolina Department of Health and Environmental Control, is presently involved in these problem areas. In the process of conducting the survey it was found that there is no available data indicating the number, type or severity of accidents occurring in the state.

*Objective:*

Initiate injury control program and encourage involvement of local environmental sanitation personnel during FY 75.

*Narrative:*

To initiate a Product Safety and Injury Control program a complete guide entitled "Injury Control and Consumer Product Safety — The Program Within the Local Health Department" was developed and sent to each District Environmental Sanitation Director. Members of the agency participated in seven advisory workshops and conferences with the U. S. Consumer Product Safety Commission to establish guidelines for use in state activities. Informational type activities engaged in were as follows:

No. safety slide series developed .....	6
No. showings .....	208
Total in attendance .....	7,488
No. educational pamphlets developed .....	13
No. copies distributed .....	61,400
No. safety films purchased .....	14
No. showings .....	765
No. attending .....	29,811
No. news releases .....	7
No. "Danger House" demonstration kits purchased .....	3
No. accident prevention programs presented .....	36
No. safety glazing pamphlets distributed .....	5,000
No. responses to public queries .....	32

The agency serves as the state's liaison representative to the U. S. Consumer Product Safety Commission. Nine consumer product safety investigations were conducted for this commission. The agency was awarded a contract by the commission to conduct 48 Flammable Fabric inspections and 91 Flammable Fabric sample collections from textile manufacturers in the state. It was not renewed, however, because of the absence of appropriate state authority.



*Objective:*

Protect the people of South Carolina against risks of injury associated with consumer products by conducting consumer protection campaigns in each health district on poison prevention and banned toys in the second and third quarters of FY 75.

*Narrative:*

The banned toys campaign was conducted in each health district in the second quarter. This consisted of educational news letters, educational materials, and TV and radio interviews. A total of 828 retail establishments were inspected with 456 confirmed banned products and 383 suspicious products found.

During the last half of the fiscal year, an extended statewide Poison Prevention campaign was conducted in each health district. Newsletters, educational materials, slide presentations and safety films were used.

## RADIOLOGICAL HEALTH

*Problem:*

No threshold level has been established for permissible radiation exposure, thus any unnecessary exposure to radiation sources is to be prevented. Such prevention of unnecessary exposure extends to direct exposure from radiation sources and from indirect exposure through environmental pathways.

*Objective:*

To collect an estimated 2,200 samples and perform an estimated 10,000 radionuclide analyses in order to insure that 5 existing and 7 proposed nuclear facilities and approximately 190 radioactive materials licensees comply with applicable regulations; and, in order to monitor environmental pathways of exposure.

*Narrative:*

In order to accomplish the above, activities were as follows:

### TABLE I — ENVIRONMENTAL SURVEILLANCE ACTIVITIES

Environmental samples collected .....	2,559
Radiological analyses performed .....	7,304
Special analyses performed .....	1,477

The surveillance activities outlined above are providing sufficient information to verify that radioactivity released to the environment and consequent radiation exposure of members of the public are as low as practicable. Surveillance activities resulted in the implementation of significant corrective action in one instance. Environmental sample

collection was greater than planned. Other samples include bioassay, contractual, and special program samples not environmentally oriented.

*Objective:*

To review an estimated 16 environmental impact statements, participate in an estimated 4 hearings, and review and comment upon an estimated 10 proposed sets of regulations potentially affecting the State's radiological health interest.

*Narrative:*

In order to accomplish the above, activities were as follows:

TABLE II — ENVIRONMENTAL IMPACT REVIEW

No. environmental impact statements reviewed .....	15
No. environmental hearings participated in .....	3
No. proposed sets of environmental regulations reviewed .....	10

The increase in the number of impact statements reviewed was planned in view of nuclear energy expansion.

*Objective:*

To conduct inspections, as indicated below, so as to enforce state regulations and licensing criteria for radioactive materials, x-ray machines, and non-ionizing sources.

Type License or Registration	No. to be Inspected
Radioactive materials .....	70
Current x-ray machines .....	500
Non-ionizing sources .....	30

*Narrative:*

In order to accomplish the above, activities were as follows:

TABLE III — RADIOACTIVE MATERIALS, X-RAY, AND NON-IONIZING SOURCES INSPECTION ACTIVITIES

No. of licenses inspected .....	42
No. of follow-up inspections of licenses .....	3
No. of pre-licensing inspections of potential licenses .....	4
No. of licensees in non-compliance .....	35
No. of non-compliance items .....	74
No. of x-ray facilities inspected .....	185
No. of x-ray machines inspected .....	677
No. of non-ionizing sources inspected .....	18

Fewer than planned license inspections were performed because of personnel deficiencies which required a redistribution of personnel to other priority tasks. More non-compliance items were found during inspections as a result of allocating the limited personnel resources to priority licenses where non-compliance items are greater in numbers. It should be noted that all non-compliance items were corrected within the



permitted time after inspection. Added emphasis was given the x-ray program during FY 75 as a participant in national programs aimed at surveying x-ray exposures. The deficiency in non-ionization sources inspections resulted from deferring such inspections to items of greater priority.

*Objective:*

To issue licenses, registrations, and amendments, as indicated below, so as to enforce state regulations and licensing criteria for radioactive materials, x-ray facilities, and x-ray machines.

Type License or Registration	No. to be Issued
Radioactive materials .....	15
X-ray facilities .....	36
X-ray machines .....	110
Amendments .....	170

*Narrative:*

In order to accomplish the above, activities were as follows:

TABLE IV — LICENSING AND REGISTRATION ACTIVITIES

No. of materials licenses issued .....	20
No. of x-ray facilities registered .....	63
No. of x-ray machines registered .....	83
No. of amendments issued .....	135

Fewer licenses, registrations, and amendments were issued in FY 75. This may be indicative of a stabilization of present licensee's or registrant's activities. At the end of FY 75 there were a total number of 203 materials licenses, 1,250 x-ray facility registrations, and 2,366 x-ray machine registrations.

*Objective:*

To provide assistance to an estimated 190 requests from other agencies and from the general public, in the area of radiological health in the form of technical assistance, emergency response, information, and training.

*Narrative:*

During FY 75, eight transportation, radiological, and/or contamination incidents involving radioactive materials were responded to by division personnel. Division personnel were also involved in training 554 persons in radiological emergency response or radiological safety. Division personnel responded to 212 requests from the general public or other state agencies for technical assistance in the radiological health area. Approximately 5,500 informational bulletins were distributed to licensees, registrants, and other interested persons of the general public.

## RECREATIONAL WATERS

*Problem:*

Public swimming pools and supervised natural swimming areas serve an estimated 80,000 persons daily in season. Improper operation and maintenance of swimming facilities, as well as improper design and construction of swimming pools, can result in the transmission of diseases and infections.

*Objective:*

To insure that in FY 75, an anticipated 125 new public swimming facilities in South Carolina will meet design and construction standards.

*Narrative:*

To meet this objective, central office personnel reviewed plans and specifications and made inspections of completed projects as shown below.

No. plans reviewed .....	137
No. new facilities constructed .....	294
No. construction inspections .....	630

The recessionary economy affected these activities in two ways. First fewer plans for future work were submitted. Conversely, new work actually increased as backlogs of previously approved projects were worked off. Part of the increase in construction inspections was a result of the need for follow-up inspections.

Considerable work has been done with engineers and contractors to reach higher standards in plans submitted and finished construction. This should reduce the need for repeated reviews of plans and should speed up project completions.

*Objective:*

To insure in FY 75 proper operation and maintenance of approximately 1,500 public swimming facilities by a program of inspection and sample collection to determine chemically or bacteriologically unsafe conditions.

*Narrative:*

Activities related to this objective were as follows:

No. facilities inspected .....	1,600
No. bacteriological samples analyzed .....	13,770
Percent of samples satisfactory .....	92%

This work, of course, is seasonal, with activity concentrated in the first and fourth quarters of each fiscal year.



## SHELLFISH

*Problem:*

Shellfish are frequently eaten raw or partially cooked and can, if harvested from contaminated waters, transmit such waterborne diseases as hepatitis, typhoid, paratyphoid and dysentery.

*Objective:*

To prevent the harvesting for human consumption of any shellfish from contaminated waters.

*Narrative:*

Patrolling was the principal activity undertaken to accomplish this objective. Twelve certified letters of warning were issued to people apprehended as they illegally harvested shellfish. Other activities were as follows:

No. patrols per week .....	30.4
No. acres patrolled per man .....	3054.6
No. water samples collected .....	1,345
No. satisfactory samples .....	885

*Objective:*

To insure that the processing of all shellfish for human consumption is in accordance with standards.

*Narrative:*

During the year two plants were closed, one for failing to comply with building regulations. The other plant closed voluntarily while construction additions were made. A summary of other activities follows:

No. processing plants .....	41
No. plant inspections .....	278
No. plants inspections satisfactory .....	270
No. meat samples collected .....	35
No. meat samples satisfactory .....	30

The number of meat samples collected was low due to difficulties in transporting samples to central office laboratories for analysis.

*Objective:*

To maintain at the present, or a lower level, the number of acres of shellfish bearing waters closed to harvesting of shellfish for human consumption.

*Narrative:*

In November 1,400 acres along Chowan Creek, Distant Creek, and Capers Creek were reopened for gathering shellfish. However, in the same month, 450 acres of shellfishing waters were closed as a precautionary measure after two fish kills caused by discharges from the

Beaufort Chemical and Research Company. Consideration was given to reopening the Litchfield Beach-Midway Inlet area; however, as of June, this area was still closed due to unsatisfactory bacteria levels. Activities related to this objective were as follows:

No. acres shellfish waters .....	275,248
No. acres closed on June 30, 1975 .....	15,273
No. premises surveyed .....	1,751

The Food and Drug Administration (FDA) rates South Carolina as having one of the better managed shellfish programs in the United States.

## SOLID WASTE MANAGEMENT

### *Problem:*

The amount of solid waste generated increases proportionately with economic and population growth. The public is poorly informed about acceptable methods of refuse collection and disposal. Promiscuous dumps and roadside litter still abound throughout the state. Rodent and other vector problems create economic losses and present health problems through vector borne diseases. Programs to insure disposal of industrial waste have not been coordinated. Recycling projects have not been effective.

### *Objective:*

By June 30, 1975 to close 350 promiscuous and open dumps in South Carolina and insure that all regulations are enforced.

### *Narrative:*

The activities relating to this objective were:

No. dumps closed .....	270
No. inspections of domestic disposal facilities .....	1,172
No. inspections of industrial disposal facilities .....	350

The closing of dumps fell short of the objective because all personnel engaged in this activity, primarily county litter officers, are not under the direct control of program personnel.

In the case of inspections of industrial disposal facilities, emphasis was purposely shifted from this activity to problems of vector control and landfills. This was done because experience showed neither health nor environment were endangered by this type waste, which was largely inert or had a very slow reaction rate.

### *Objective:*

During FY 75 to increase by 10 percent the number of man-hours devoted to public information programs throughout the state.



*Narrative:*

The Solid Waste Division participated in the preparation of a motion picture film which will depict the role of the agency in solid waste management projects. As a consequence, some 767 man hours were devoted to this objective.

*Objective:*

To assist in the operation of 50 vector control projects related to solid waste management programs.

*Narrative:*

Additional manpower was placed in the problem of properly closing out landfills and open dumps. Wherever possible, open dumps and landfills were baited to control vectors.

A survey has been implemented to determine if fly presence and breeding is significantly greater in "greenboxes" with the lids on or off.

Sixty-four vector control projects were undertaken. Disposition of hazardous wastes and hospital wastes was added to this program's responsibilities during the year.

*Objective:*

Assist both industries and municipalities in their efforts to recycle waste. To increase by 10% the number of entities now recycling materials.

*Narrative:*

This effort, new this year, showed considerable success, with 35 recycling projects initiated or coordinated.

*Objective:*

To insure that 75% of industries not now using community landfills or other accepted facilities either begin using approved sanitary landfills or open their own permitted industrial landfills.

*Narrative:*

As previously mentioned, manpower was shifted from the open dump problem to this area. Consequently 408 industries were inspected.

The Lexington County Landfill No. 1 was selected by the Environmental Protection Agency (EPA) to be included in a one year study of leachate generation in sanitary landfills. The Old Ashley River Dump in Charleston is also undergoing sampling and analysis of leachate discharges.

*Objective:*

Implement Collection Regulations during FY 75 by permitting 80 private collectors of industrial waste.

*Narrative:*

This objective did not get underway until June 1, 1975 instead of July 1, 1974. As a consequence, only 32 collectors were permitted.

## VECTOR CONTROL

*Problem:*

Local Vector Control Programs, being restricted in size and scope, are unable to have or to get the specialized services and resources needed to function at optimal levels. Specific problems peculiar to each vector exist in the areas of mosquito control, rodent control, tick-borne Rocky Mountain Spotted Fever (RMSF), and flies.

*Objective:*

To enable all approved local vector control programs to be allocated and/or purchase insecticides and rodenticides at economical prices with convenient availability from the Division of Vector Control Warehouse.

*Narrative:*

Malathion for mosquito control and warfarin for local rodent control programs were made available as follows:

Malathion .....	27,600 gal.
Warfarin .....	15,125 lbs.

Because of the increased cost of supplies, a supplemental appropriation of \$168,212 was needed to obtain insecticides for the spring season.

*Objective:*

To provide vector control equipment (trucks, sprayers, hand sprayers, etc.), equipment maintenance, and equipment repair.

*Narrative:*

As in past years, trucks were furnished to approved vector programs for use during the mosquito control season. This year 66 trucks were made available and a small equipment inventory was maintained and available for use.

*Objective:*

To provide general vector information services for local programs and for citizens of the state.

*Narrative:*

More than 1,100 requests for information and technical services concerning vector control were honored this year. Thirty training programs were conducted. The laboratory testing of ticks for RMSF was initiated in the spring of 1974. During the calendar year of 1974 about 1,700 ticks were examined and the individuals were notified of the results. During the first six months of calendar year 1975, more than 1,500 ticks have



been submitted for testing. An entomological laboratory has functioned all year for insect and animal identification. News releases, T.V. and radio spots were used to get information to the public. Additionally, 62 volumes of references were provided.

*Objective:*

To develop and distribute informational-educational materials on vector control that may be used by citizens, public and private groups, and in health departments.

*Narrative:*

Six different informational and educational materials were produced and distributed on the subjects of ticks, rodents, flies, and mosquitoes.

*Objective:*

To develop and implement specific plans for resolution of problems related to mosquitoes, rodents, ticks, and flies.

*Narrative:*

Professional entomological assistance was provided to local mosquito control programs. The mosquito borne disease action plan was updated. Six meetings were held to promote cooperation between federal, state and local agencies in seeking ways to deal with the problem of mosquito production on spoil areas.

Other activities included:

No. vector control workers assigned during summer .....	22
No. spoil areas dredging permits reviewed .....	177
No. environmental impact statements reviewed .....	6
No. mosquito program analyses prepared .....	11
No. impoundment inspections .....	11

Professional rodent control assistance was provided to local rodent control programs. Functioning local rodent control programs were reviewed periodically. Rodent control services were rendered to various state institutions. Other rodent control activities were:

No. new rodent programs started .....	2
No. persons receiving rodent control training .....	40
No. premises inspected .....	33
No. rodent projects inspected .....	4
No. rodent program analysis .....	1

Professional entomologists have worked with ticks and RMSF. Public information measures were used to combat RMSF. This information campaign was supplemented by laboratory services testing ticks that had bitten humans. Articles were placed in newspapers and magazines.

These data cover a completed tick season from one calendar year and therefore is reported in the fiscal year when the tick season ends.

No. ticks tested .....	1,700
No. S. C. RMSF cases .....	55
No. S. C. RMSF deaths .....	5

Professional entomologists have provided consultative technical assistance to local health officials on fly problems. Certificates of Registration for caged layer poultry houses were issued. Fifty persons received intensive training in fly control. Twenty-one service requests involving flies were handled.

## WASTEWATER AND STREAM QUALITY CONTROL

### *Problem:*

Water quality is not uniform throughout the State. Reasons include:

- a. Inadequate treatment of wastes in many industrial, municipal and privately owned domestic waste systems as a result of inadequate design and/or inferior construction and materials; poor operation and maintenance including a lack in the number of properly qualified operating personnel.
- b. New waste treatment systems are constantly being designed, constructed and placed in operation, resulting in an ever-increasing volume of waste being discharged to the waters of the State. Since the waste assimilative capacities of our waters are constant, it is obvious that effluent quality must also be increased in many situations.
- c. Accidental discharges of industrial plant chemicals and wastes, along with spills of petroleum products and chemicals, resulting from truck, train and shipping accidents, cause a temporary but serious degradation of water quality.

### *Objective:*

To insure that all new waste treatment systems to be installed in South Carolina in FY 1975, as well as improvements to upgrade existing systems in accordance with compliance schedules to be applied in FY 1975, meet design and construction standards.

### *Narrative:*

During the year, 1,582 projects were reviewed in relation to the State Construction Permitting Requirements. Many of the projects reviewed were the result of the National Pollutant Discharge Elimination System (NPDES) requirements. It is projected that activity within this area will increase substantially during the coming year as more permits are issued. During this fiscal year, permits were issued as follows:



Category	No. Permits Issued (Construction)
New systems .....	157
Modification to existing systems .....	55
Expansion to existing systems .....	305
TOTAL .....	517

Within NPDES Permit Program activities were as follows:

Certifications .....	328
Drafts .....	238
Issues .....	85
Comments .....	134

On June 10, 1975, NPDES Permitting Authority was granted to this Agency by the Environmental Protection Agency (EPA), who formerly managed the system. Prior to this date, the agency only certified NPDES Permits issued in South Carolina. In January, 1975, the agency began drafting Industrial Permits; they were forwarded to EPA for issuance.

*Objective:*

To perform facility evaluations (waste treatment plant inspections) on known waste treatment plants, including composite sampling and laboratory analyses.

*Narrative:*

The following is a breakdown of evaluations performed:

Type Evaluation	Number Performed
Federal-7500-5 .....	205
Routine .....	3,849
Total .....	4,054

There are approximately 1,920 permitted waste treatment systems in the State. Within the number of evaluations performed, this represents approximately 2.1 evaluations per facility per year—well above the recommended 1.5 evaluations per facility per year.

*Objective:*

To investigate and initiate action on all spills or unauthorized dischargers of untreated wastes (domestic or industrial) during FY 1975.

*Narrative:*

During the year there have been 143 reported spills of oil or other hazardous materials which threatened the public safety and/or bodies of water within the State. This is about three times the number reported (52) during FY 1974. Action was taken on all spills. Whether this increase in reported spills is a result of a greater public awareness of the hazards related to spills or actually a greater number of spills occurring

cannot be determined. It is felt that the effectiveness of the emergency response team has been beneficial in preventing the contamination of water supply systems and the integrity of the environment within this State.

*Objective:*

To collect stream samples from a network of sampling stations from throughout the State and to perform laboratory analyses as required.

*Narrative:*

There were 6,933 samples collected and analyzed. At the end of this fiscal year there were 32 people who conducted this Program: 13 stream monitors, 14 laboratory personnel and five who administered/implemented and provided technical assistance to the Program.

*Objective:*

To review all plans for waste treatment management planning grants under section 201 of PL 92-500 submitted during FY 1975.

*Narrative:*

Within the 201 Facilities Planning Grants, (Steps I, II, and III), much progress was made over the year. During mid-year, the FY 1976 Priority List was prepared and a public hearing was held. This list was included within the FY 1976 State Program Plan and will be approved by EPA concurrently. The Grant amount committed on this list amounts to \$92,906,041, leaving in reserve \$55,885,189 to be committed within the first quarter of FY 1976. Extending this list, the Bureau developed a progress chart which related to each 201 applicant, names a project manager to each, and puts each one with a time-to-complete limit. This was accomplished to have available a management tool to control the scheduling of Steps I, II, and III. The management of this will be coordinated by an EPA assignee who will also coordinate several other programs within this Bureau.

Several meetings were held during the year with Consulting Engineering firms. They were basically pre-application and pre-design conferences. Consultants were instructed in how to use the check-off questionnaire and how it can provide an acceptable 201 Plan if fully utilized. All consultants in the State were provided copies of this questionnaire. Because of many past events, a plan has been adopted to have monthly meetings with officials and consultants associated with the Charleston 201 Plan. This was decided on in order to make corrections before they occur.

During the year, there were 169 grants awarded by EPA. These were: 60 Step I Facilities Planning Grants, 9 Step II Design Grants, 10 Step III Construction Grants, 11 Cost overruns, seventy-four 206(a) Reimburse-



ble Grants, and five 208 Areawide Planning Grants. The total dollar amount was \$41,182,698.

Another task assumed by the agency is the reviewing and certifying of Areawide Waste Treatment Management Plans as designated by the Governor of this State. The Governor designated five areas within the State, and as a result of urban industrial concentrations or other factors, they have substantial water quality control problems. The five areas are: Low Country, Charleston-Berkeley-Dorchester Counties, Waccamaw, Central Midlands, and Appalachia. It will be the responsibility of this agency to review each of the planning phases as they become due and insure that accepted guidelines are followed. EPA has awarded \$4,205,450 to the State for this planning process.

*Objective:*

To develop water quality standards and determine quantities of waste constituents which may be discharged by each waste treatment system without violating the adopted water quality standards and insure compliance with State water quality criteria.

*Narrative:*

To better manage water quality, a wasteload limitation on oxygen demanding waste is determined in order for each and every discharger in the State to know what degree of treatment will be required of him in order to comply with State and Federal law. These limitations are determined for NPDES Permits, State Construction Permits, 201 Facility Planning, Basin Planning, and 208 Areawide Planning. The limitations themselves are determined through the development of mathematical Stream Simulation Models. During this past year there were two areas studied and models developed. They were the Intracoastal Waterway and the Pocatigo River studies. A third study, the Coosawhatchie River, was delayed due to excessive rain and runoff.

Statistical data was extracted from computer storage and compiled into a report, the 305(b) Annual Water Quality Assessment, as required by law. The report basically showed that of the 13 major waterways of the State, there are no significant water quality violations. The report did not address the minor waterways where water quality violations do exist since the minor ones were not required by EPA.

During the last two quarters of this fiscal year the agency, with guidelines and assistance from EPA, drafted and put into a final version the FY 1976 State Water Pollution Control Program Plan. This plan is required by Federal law and is developed annually in order that Federal funds be allocated to the State for water pollution control purposes.

Enforcement actions conducted this fiscal year continued to be handled on a case by case administrative basis. This usually provides results without further litigations. During this year, 113 cases were handled in

such a manner. In those cases where administrative actions were not sufficient, administrative (show cause) hearings were initiated. These are more formal in nature and there have been seven such hearings conducted this year. Almost all of these have resulted in the issuance of an administrative order by the agency's Board. There have been nine orders issued this year. Once the orders were issued, they were monitored on a periodic basis to ensure compliance. In cases where compliance was not adhered to, court actions were deemed necessary. Of these orders, four cases were referred to the Attorney General of South Carolina for further action. Assistance was provided to the Attorney General's Office in the preparation of guidance and technical assistance with these cases.

#### *Objective:*

To develop and complete during FY 1975, basin plans for the Edisto-Combahee, Savannah, and Pee Dee River Basins within the State.

#### *Narrative:*

A second Basin Plan (Edisto-Combahee) was completed this fiscal year. The two remaining Basin Plans are to be completed and submitted for approval by the end of the second quarter of FY 1976.

#### *Activity Summary:*

Activities related to the aforementioned objectives were as follows:

Activity	Number
Permits	
NPDES	
drafted .....	238
certified .....	328
issued — authority to issue was not	
granted until June 10, 1975 .....	85
Industrial — issued .....	83
Municipal — issued .....	55
Community — issued .....	356
Agricultural — issued .....	24
Army Corps of Engineers — reviews .....	N/A
Monitoring of Wastewater Treatment Facilities	
Federal Operation and Maintenance 7500-5 .....	205
Routine evaluations .....	3,849
Compliance evaluations .....	344
Stream Monitoring	
Primary Sampling Sites — (redefined FY 75) .....	2,447
Secondary Sampling Sites — (redefined FY 75) .....	4,486
Facility Sampling — Samples .....	6,585
Special Investigations	
Complaints investigated .....	336
Spills, Hazardous Materials, oils, etc. ....	143
Fish Kills investigated .....	52
Special Studies conducted .....	3



Compliance and Enforcement	
Staff Compliance Actions .....	113
Commissions and Court Orders Issued .....	9
Planning	
303 (e) Basin Plans .....	1
208 Areawide Wastetreatment Planning Grants .....	5
201 Construction Grants Program	
Step I — Facilities Planning Grants .....	60
Step II — Design Grants .....	9
Step III — Construction Grants .....	10
Cost Overruns .....	11
Reimbursable Grants .....	74

## WATER SUPPLY

### *Problem:*

An estimated 2.3 million South Carolinians plus many tourists now drink water daily from more than 2,600 public or semi-public water supply systems. New systems are constantly being built. Diseases which may be transmitted through water include dysentery, hepatitis, typhoid, paratyphoid, leptospirosis, and others. Many toxic and aesthetically or economically undesirable chemicals may be present in water.

### *Objective:*

To insure that plans and specifications for new water supply systems and modifications to existing systems proposed during FY 75 meet design standards.

### *Narrative:*

As in the past, it has been necessary to review some of the plans more than once because of a lack of sufficient information being included at time of submission.

No. plans and specifications submitted .....	533
No. plans and specifications reviews accomplished .....	854
No. projects approved (of submitted) .....	474

As seen above, 89% of projects submitted for review were approved. The remainder are awaiting further information before the review process can be completed. The low number of plans and specifications submitted is a reflection of a recession in the economy.

### *Objective:*

To insure that all water supply systems constructed during FY 75 meet all construction standards, plans and specifications requirements.

### *Narrative:*

Inspections, as indicated below, were conducted to insure accomplishment of this objective.

No. preliminary site inspections .....	262
No. during construction inspections .....	581
No. final construction inspections .....	434

Based upon these inspections, 205 operational permits, out of 408 requested, were issued. This is a reflection of the fact that contractors did not always have a project completed before requesting a final inspection.

#### *Objective:*

To insure that all water supply systems in operation during FY 75 meet all standards of operation and maintenance to provide safe potable and palatable water in sufficient quantity and quality to the public.

#### *Narrative:*

The principal activity is to insure safe potable and palatable water by conducting operations and maintenance (O & M) surveys. The 2,605 O & M surveys conducted were almost three times the 973 performed in FY 74. This increase was caused by a better allocation of manpower.

Cross-connection control is vital to the achievement of this objective. This, however, is essentially an aspect of the program carried out voluntarily by the local government and private water utilities. While 824 cross-connections were discovered only 563 were eliminated, indicating that utility management did not assign this problem the high priority it should have received in order to properly protect the public health.

#### *Objective:*

To insure that the water delivered to the public by all water supply systems meets the necessary standards of quality consistent with the public health and safety requirements, as established, through an effective water quality monitoring program and water plant laboratories certification program.

#### *Narrative:*

The monitoring activities for the year are as indicated below:

No. water systems samples .....	2,452
No. bacteriological samples collected .....	33,242
No. systems with satisfactory bacteriological samples .....	2,331
No. systems sampled for fluoride .....	50
No. systems with satisfactory fluoride samples .....	35
No. surface water plant labs surveyed .....	94
No. surface water plant labs certified .....	80

The fluoride concentration was outside the established limits in 15 systems primarily because of equipment failure. Plant laboratories which were not certified were lacking essential equipment, which is now on order.



AIR QUALITY CONTROL ORDERS AND VARIANCES: STATUS  
FY 1975

- 74-30-A E. I. Dupont de Nemours and Company, Camden, South Carolina  
Variance from the provisions set forth in South Carolina Air Pollution Control Regulations 2.4, Section I and II and Regulation 2.6, Standard No. 1, Section I and Standard No. 2, Section I was issued October 8, 1974 and was effective until July 1, 1975. The company will buy fuel oil for their boilers as soon as it becomes available.
- 75-1-A Rockwell International, Draper Division, Spartanburg, S. C.  
Variance from South Carolina Air Pollution Control Regulations 2.4 and 2.6, Standard 5A, Section VII was issued April 8, 1975. The company was given until October 31, 1975 to have the emissions from their cupolas in full compliance.
- 75-2-A Owen Steel Company, Cayce, South Carolina  
Variance from South Carolina Air Pollution Control Regulations 2.4 and 2.6, Standard 5A, Section VII was issued June 10, 1975. The company was given until July 1, 1975 to have the emissions from their (charging and pouring phases) electric arc furnaces in full compliance.
- 75-3-A E. I. Dupont de Nemours and Company, Camden, South Carolina  
Variance from South Carolina Air Pollution Control Regulations 2.4 and 2.6, Standard 5A, Section VII was granted June 10, 1975 for the installation of dust collectors on their coal-fired boilers. The company will be in full compliance by December 31, 1976.
- 75-4-A Manetta Mills, Inc., Lando, South Carolina  
Order issued on July 14, 1975 for violation of South Carolina Air Pollution Control Regulation 2.6, Standard No. 2, Section I. The mill was given until July 1, 1976 to have the emissions from their boilers in full compliance.
- 75-5-A Agrico Chemical Company, Charleston, South Carolina  
Consent Order issued July 14, 1975 for violation of South Carolina Air Pollution Control Regulation 2.6, Standard No. 5, Section VII. The company has agreed to install a baghouse on their cooler and will be in full compliance by December 31, 1975.

## WATER POLLUTION CONTROL ORDERS

**ORDER #74-16-W****DATE:** October 14, 1974**RESPONDENT:** Clemson Realty Company, Newton Apartments, Pickens County**CONCLUSION OF LAW:**

Clemson Realty Company was found to be in violation of; (1) Section 15 of the Pollution Control Act for the State of South Carolina, in that its waste treatment facility was operating in violation of the construction permit, (2) Section III-3 of the Water Classification Standards System for the State of South Carolina, in that its discharge was not receiving the required minimum of secondary treatment, and (3) Section IV of the Water Classification Standards System for the State of South Carolina, in that the geometric mean of five (5) consecutive samples of its discharge exceeded the allowable level for fecal coliform bacteria.

**ACTION:**

Clemson Realty Company was ordered to; (1) Submit an application for a permit and an engineering report for a proposal to provide adequate treatment by February 1, 1975, and (2) Complete construction of an adequate waste treatment facility by May 1, 1976.

**ORDER #74-14-W****DATE:** November 14, 1974**RESPONDENT:** Crescent Company, Hillbrook Apartments, Spartanburg County**CONCLUSION OF LAW:**

The Crescent Company was found to be in violation of Section 15(1) of the Pollution Control Act, in that a collection system and pump station has been constructed without obtaining a construction permit.

**ACTION:**

Crescent Company was ordered to submit an application for a permit by December 15, 1974.

**ORDER #74-18-W****DATE:** November 14, 1974**RESPONDENT:** Rock Springs Development Company, Arlington Heights S/D, Kershaw County



**CONCLUSION OF LAW:**

Rock Springs Development Company was found to be in violation of Section IV of the Water Classification Standards System for the State of South Carolina, in that the geometric mean of five (5) consecutive samples of the facility's discharge exceeded the allowable level of fecal coliform bacteria.

**ACTION:**

Rock Springs Development Company was ordered to; (1) Begin construction of disinfection facilities by November 30, 1974, and (2) Complete construction of disinfection facilities by December 30, 1974.

**ORDER #75-1-W**

DATE: January 15, 1975

RESPONDENT: Town of Blackville, Barnwell County

**CONCLUSION OF LAW:**

The Town of Blackville was found to be in violation of; (1) Section 13(a) of the Pollution Control Act for the State of South Carolina, in that it intermittently discharges to waters of the State organic or inorganic matter that causes or tends to cause a condition of pollution, and (2) Section III-3 of the Water Classification Standards System for the State of South Carolina, in that it intermittently discharges into State waters waste amenable to treatment or control.

**ACTION:**

The Town of Blackville was ordered to; (1) Implement a maintenance program to promote maximum efficiency of the waste treatment facility, and (2) Construct disinfection facilities by July 1, 1975.

**ORDER #75-2-W**

DATE: February 21, 1975

RESPONDENT: Beaufort Chemical & Research Company, Beaufort County

**CONCLUSION OF LAW:**

Beaufort Chemical & Research Company was found to be in violation of; (1) Section 13(a) of the Pollution Control Act for the State of South Carolina, in that it willfully or negligently allowed the discharge into State waters of organic or inorganic matter that causes or tends to cause a condition of pollution, and (2) Section III-3 of the Water Classification Standards System from the State of South Carolina, in that it discharges into State waters waste amenable to treatment or control.

**ACTION:**

Beaufort Chemical and Research Company was ordered to cease and desist the discharge of wastewater into State waters, and said Order was to remain in effect until a hearing could be conducted and a final determination made.

**ORDER #75-3-W**

DATE: April 14, 1975

RESPONDENT: Beaufort Chemical & Research Company, Beaufort County

**CONCLUSION OF LAW:**

Beaufort Chemical & Research Company was found to be in violation of; (1) Section 13(a) of the Pollution Control Act for the State of South Carolina, in that it willfully or negligently allowed the discharge into State waters of organic or inorganic matter that causes or tends to cause a condition of pollution, and (2) Section III-3 of the Water Classification Standards System for the State of South Carolina, in that it discharges into State waters waste amenable to treatment or control.

**ACTION:**

Beaufort Chemical and Research Company was ordered to submit an engineering report outlining methods of solving the problem of groundwater contamination by June 30, 1975. If the engineering report indicated that construction of a treatment facility was necessary, a compliance schedule was to be developed at that time.

**ORDER #75-4-W**

DATE: April 8, 1975

RESPONDENT: Mullinax Hog Farm, Anderson County

**CONCLUSION OF LAW:**

Mullinax Hog Farm was found to be in violation of Section 15 of the Pollution Control Act for the State of South Carolina, in that its waste treatment facility was not constructed in accordance with the construction permit.

**ACTION:**

Mullinax Hog Farm was ordered to correct reported deficiencies and obtain approval for operating the waste treatment facility by May 15, 1975; or else terminate use of the facility by June 1, 1975.



## CONSENT ORDERS

### ORDER #74-14-W

DATE: December 6, 1974

RESPONDENT: ESB Incorporated (Exide Battery), Sumter County

#### ACTION:

Exide Battery was ordered to immediately initiate action to implement the recommendation of the Ground Water Contamination Study, dated July, 1974, by its consulting engineers and complete construction of all improvements by May 30, 1975.

### ORDER #74-15-W

DATE: September 27, 1974

RESPONDENT: Edgefield County Water and Sewer Authority, Town of Johnston, Edgefield County

#### ACTION:

Edgefield Water and Sewer Authority was ordered to provide disinfection of the effluent from the waste treatment facility serving the Town of Johnston with construction of disinfection facilities to be completed by February 15, 1975.

## ORDERS AMENDED

Order No.	Respondent	New Compliance Date
71-4-W	Westvaco Corp.	October 1, 1975
74-7-W	Pine Haven Nursing Home	July 30, 1975
74-8-W	Matthews Realty Company	October 15, 1975
73-12-W	C. A. Laffitte Farms	February 15, 1975
72-6-W	Spartan Mills, Inc.	March 31, 1976
73-1-W	Buffalo Water & Sewer District	June 15, 1977
73-3-W	Town of Clover	July 1, 1977
73-36-W	Town of Gaffney	June 30, 1977
73-24-W	Town of Timmons ville	July 1, 1977
73-9-W	Town of Fort Mill	September 1, 1976

The following Orders were amended to require municipalities to provide adequate waste treatment facilities in accordance with the recommendation of their respective 201 Facilities Plan, as approved by the Department of Health and Environmental Control and the Environmental Protection Agency.

73-13-W	Town of Westminster
73-17-W	Town of Woodruff
73-12-W	Town of Chesnee
73-24-W	Riverdale Mills Water District
73-15-W	Town of Pacolet Mills

73-28-W	Chester Sewer District
73-11-W	North Charleston Sewer District
73-4-W	City of Charleston
73-6-W	Hanahan Public Service District

### ORDERS RESCINDED

Order #	Respondent
74-1-W	Truck Stop, Inc.—Richland County
73-34-W	Robert's Carwash—York County
72-2-W	Reeves Brothers, Inc., Fairforest Finishing Division Spartanburg County
74-4-W	Utilities, Inc.—Lexington County
73-22-W	St. Joe Paper Company—Laurens County
73-27-W	Gerrish Milliken, Inc.—Anderson County
73-31-W	Leaphart Utilities—Lexington County
72-9-W	Perry Parks, Inc., Beachwood Trailer Park—Horry County
74-5-W	C. H. Patrick & Company—Greenville County

### PUBLICATIONS\*

#### *Communications*

- Update Magazine, Autumn 1974, Volume 4, Number 4
- Update Magazine, Winter 1975, Volume 5, Number 1
- Update Magazine, Spring 1975, Volume 5, Number 2
- Update Magazine, Summer 1975, Volume 5, Number 3

#### *Comprehensive Health Planning*

- Directory of Environmental Services in South Carolina
- Directory of Personal Health Services in South Carolina

#### *Laboratory*

- DiSalvo, Arthur F. Antifungal Properties of a Plant Extract. I. Source and Spectrum of Antimicrobial Activity. *Mycopathologia et Mycologia Applicata* 54 (2): 215-219, 1974.
- Reddick, Anne. Evaluation of the IFA-GC procedure in a low risk population. *Health Laboratory Science* 12 (3): 1975.
- Reddick, Anne. A simple carbohydrate fermentation test for identification of the pathogenic *Neisseria*. *J. Clinical Microbiology* 2 (1). 1975.

#### *Maternity Care and Child Health*

- Policy Manual for Nursing Services, Bureau of Maternal and Child Care, Revised 1975.

#### *Program Management*

- Annual Progress Report, Department of Health and Environmental Control, FY 1974.

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\* Does not include approximately 35 educational brochures, newsletters, posters, displays, pamphlets and handbooks.



FY 1975 Plans for Programs, Supportive Services, Consultative Activities, and Special Projects of the Department of Health and Environmental Control.

### *Radiological Health*

Transportation of Radioactive Materials in South Carolina.

### *Wastewater*

- Rhame, George A., Fanning, Wayne R.; Water and Pollution Control Association of South Carolina, *Water and Pollution Control Journal*, "When is a BOD?" Fall, 1973, Vol. 1, No. 1, P. 8.
- Trani, Samuel E., P.E.; Water and Pollution Control Association of South Carolina, *Water and Pollution Control Journal*, "The Phantom Deoxygenation Rate,  $K_1$ , in a Stream"; Winter, 1974, Vol. 1, No. 2, P. 8.
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- S. C. Department of Health and Environmental Control, *State of South Carolina Water Pollution Control Program, Fiscal Year 1975*, 1974.
- S. C. Department of Health and Environmental Control, *Summary, Preliminary State Program Plan for Water Pollution Control for Fiscal Year 1975*, 1974.
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- Office of Environmental Quality Control, *1974 Needs Survey - Category VI - Urban Stormwater Study for the State of South Carolina*, S. C. Department of Health and Environmental Control.

S. C. Department of Health and Environmental Control; *Proposed Permit Program By The South Carolina Department of Health and Environmental Control For Participation in the NPDES, 1974.*

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Trani, Samuel, E., P.E.; Water and Pollution Control Association of South Carolina, *Water and Pollution Control Journal*, "On Advancing with the New Pollution Control Technology", Spring, 1975, Vol. 2, Bo. 3, P. 8.